

**IN THE UNITED STATES DISTRICT COURT  
FOR THE EASTERN DISTRICT OF TEXAS  
MARSHALL DIVISION**

ROVI GUIDES, INC.,

Plaintiff,

v.

COMCAST CORPORATION; COMCAST  
CABLE COMMUNICATIONS, LLC;  
COMCAST CABLE COMMUNICATIONS  
MANAGEMENT, LLC; COMCAST OF  
HOUSTON, LLC; COMCAST BUSINESS  
COMMUNICATIONS, LLC; COMCAST  
HOLDINGS CORPORATION; COMCAST  
SHARED SERVICES, LLC; ARRIS  
INTERNATIONAL PLC; ARRIS GROUP  
INC.; ARRIS TECHNOLOGY, INC.; ARRIS  
ENTERPRISES LLC.; ARRIS SOLUTIONS,  
INC.; PACE LTD.; PACE AMERICAS  
HOLDINGS, INC.; PACE AMERICAS  
INVESTMENTS, LLC; PACE AMERICAS,  
LLC; TECHNICOLOR SA; TECHNICOLOR  
USA, INC.; and TECHNICOLOR  
CONNECTED HOME USA LLC,

Defendants.

Case No. 2:16-cv-00322

**DEMAND FOR JURY TRIAL**

**FIRST AMENDED COMPLAINT  
FOR PATENT INFRINGEMENT**

Plaintiff Rovi Guides, Inc. (“Rovi Guides”) (“Rovi Guides,” “Rovi,” or “Plaintiff”) hereby brings this First Amended Complaint for patent infringement (“Complaint”) against Comcast Corporation; Comcast Cable Communications, LLC; Comcast Cable Communications Management, LLC; Comcast of Houston, LLC; Comcast Business Communications, LLC; Comcast Holdings Corporation; Comcast Shared Services, LLC (all Comcast entities, collectively, “Comcast” or “Comcast Defendants”); Arris International plc; Arris Group Inc.;

Arris Technology, Inc.; Arris Enterprises LLC; Arris Solutions, Inc.; Pace Ltd.; Pace Americas Holdings, Inc.; Pace Americas Investments, LLC; Pace Americas, LLC (all Arris and Pace entities, collectively, “Arris” or “Arris Defendants”); Technicolor SA; Technicolor USA, Inc.; Technicolor Connected Home USA LLC (all Technicolor entities, collectively, “Technicolor” or “Technicolor Defendants”); (Arris and Technicolor, collectively, “Manufacturer Defendants”) (all defendant entities, collectively, “Defendants”) for infringement of U.S. Patent Nos. 8,006,263 (“the ’263 Patent”), 8,578,413 (“the ’413 Patent”), 8,046,801 (“the ’801 Patent”), 8,621,512 (“the ’512 Patent”), 8,768,147 (“the ’147 Patent”), 8,566,871 (“the ’871 Patent”), and 6,418,556 (“the ’556 Patent”) (collectively, “the Asserted Patents”). Plaintiff, on personal knowledge as to its own acts, and on information and belief as to all others based on investigation, alleges as follows:

### **SUMMARY OF THE ACTION**

1. For over a decade Comcast has built its interactive cable business on the back of Rovi’s technology that Comcast had licensed for a fixed term. Comcast refuses to renew its license on acceptable terms and continues to make, use, sell/lease and offer to sell/lease products that not only practice Rovi’s patented innovations, but also compete with Rovi’s own Interactive Program Guide (“IPG”) products. The Comcast X1 IPG Product (alone and/or as implemented on various digital receivers) infringes at least one claim of each of the Asserted Patents and competes with Rovi’s Connected Guide technology, which also practices Rovi’s patented technology. This action seeks to put an end to Comcast’s, and the Manufacturer Defendants’, unauthorized, infringing conduct.

2. Twelve years ago, when Rovi’s patent portfolio was less than half the size it is today and when it did not yet include many of the patented innovations that consumers have

come to demand, such as video-on-demand, whole-home DVR technology, and robust mobile access to and control of in-home set-top boxes, Comcast paid Rovi over \$250 million for a license to Rovi's patent portfolio ("License"). The Comcast License also included important, non-monetary terms.

3. As a result of Comcast's License, Comcast was licensed to the Asserted Patents for certain uses in connection with Comcast's and its affiliates' Pay-TV systems. However, Comcast's License expired on March 31, 2016, and Comcast has not only failed to remove its infringing products and services from the market, it continues to provide those infringing products and services, with the aid and assistance of the Manufacturer Defendants.

4. As part of the parties' negotiations in an attempt to renew Comcast's License, Rovi provided Comcast with detailed claim charts and other evidence demonstrating how Comcast's Xfinity television products and services, including its X1 IPG Product, infringe at least one claim of several of the Asserted Patents. Rovi also explained to Comcast that without renewing its License, Comcast would no longer have permission to make use of Rovi's patented innovations. Instead of taking a license, Comcast has decided to willfully infringe the Asserted Patents.

5. Comcast's decision to willfully infringe stands in stark contrast to its recognition twelve years ago of the need for a license from Rovi. Comcast's refusal to take a license today also stands in stark contrast to other major Pay-TV providers, such as AT&T, which has more subscribers than any other Pay-TV provider in the U.S., and which recently reaffirmed the need for a license to Rovi's guidance patent portfolio, including a license to the Asserted Patents, by signing a comprehensive patent license agreement with Rovi.

6. In addition to Pay-TV providers, most of the market-leading set-top box manufacturers also have taken limited licenses to Rovi's patented inventions, including defendants Arris and Technicolor (through a predecessor-in-interest). However, those licenses do not extend to the unlawful acts at issue herein—i.e., they do not permit Arris or Technicolor to make or provide digital television receivers, such as set-top boxes ("STB"), for use by or with Comcast's Xfinity service in the United States.

## **THE PARTIES**

### **I. ROVI: A PIONEER IN MEDIA TECHNOLOGY**

7. Rovi is and has been a pioneer and recognized leader in media technology, including the technology used to facilitate consumer access to and discovery of television and other audiovisual media. Since introducing one of the first on-screen electronic program guides in 1981, Rovi has continued to innovate to develop products, services, and other solutions to connect consumers with entertainment.

8. Thanks largely to those innovations, Rovi has amassed a portfolio of over 1,200 issued U.S. patents and 500 pending U.S. patent applications, including the Asserted Patents. Rovi has added to its patent portfolio through strategic acquisitions of groundbreaking companies, such as Veveo, Inc., and of patent portfolios from world-class innovators, such as Microsoft. Rovi's patented inventions are used daily by consumers of media content, and are "must-haves" for television and other media service providers and the consumer electronics industry that supports them.

9. In recognition of the importance and value of Rovi's patented technologies and Rovi's role as an innovator, every major U.S. Pay-TV provider, including Comcast, and almost every major U.S. set-top box manufacturer, has taken a license to a portfolio of Rovi's patents.

## **II. ROVI: CORPORATE ENTITIES**

10. Plaintiff Rovi Guides, Inc. is a Delaware corporation with a principal place of business at Two Circle Star Way, San Carlos, California 94070. Rovi Guides is a wholly-owned subsidiary of Rovi Corporation and is the owner of the Asserted Patents.

11. Rovi is a global leader in digital entertainment technology solutions. Rovi's market leading digital entertainment solutions enable the proliferation of access to media on electronic devices; these solutions include products and services related to IPGs and other content discovery solutions, personalized search and recommendation, advertising and programming promotion optimization, and other data and analytics solutions to monetize interactions across multiple entertainment platforms. Rovi's solutions are used by companies worldwide in applications such as cable, satellite, and internet protocol television ("IPTV") receivers (including digital television set-top boxes ("STBs") and DVRs); PCs, mobile, and tablet devices; and other means by which consumers connect to entertainment.

## **DEFENDANTS**

### **III. THE COMCAST DEFENDANTS**

12. On information and belief, Comcast Corporation is a Pennsylvania corporation with a principal place of business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103. Through its wholly-owned subsidiaries, Comcast Corporation provides "Comcast" branded services, including Xfinity digital video, audio, and other content services to customers. Subscribers to Comcast's Xfinity television services receive a receiver, such as a set-top box. Upon information and belief, Comcast Corporation, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides the infringing receivers to customers.

13. On information and belief, Comcast Cable Communications, LLC is a Delaware limited liability company with a principal place of business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103. On information and belief, Comcast Cable Communications, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast Cable Communications, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

14. On information and belief, Comcast Cable Communications Management, LLC is a Delaware limited liability company with a principal place of business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103. On information and belief, Comcast Cable Communications Management, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast Cable Communications Management, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

15. On information and belief, Comcast of Houston, LLC is a Delaware limited liability company with a principal place of business at 8590 W. Tidwell Road, Houston, TX 77040-5578. On information and belief, Comcast of Houston, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast of Houston, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

16. On information and belief, Comcast Business Communications, LLC is a Pennsylvania limited liability company with a principal place of business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103. On information and belief, Comcast Business Communications, LLC is a subsidiary of Comcast Corporation. Upon

information and belief, Comcast Business Communications, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

17. On information and belief, Comcast Holdings Corporation is a Pennsylvania corporation with a principal place of business at One Comcast Center, 1701 John F. Kennedy Blvd., Philadelphia, Pennsylvania 19103. On information and belief, Comcast Holdings Corporation is a subsidiary of Comcast Corporation. Upon information and belief, Comcast Holdings Corporation, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

18. On information and belief, Comcast Shared Services, LLC is a Delaware corporation with a principal place of business at 330 N. Wabash Ave. 22, Chicago, IL 60611-3586. On information and belief, Comcast Shared Services, LLC is a subsidiary of Comcast Corporation. Upon information and belief, Comcast Shared Services, LLC, jointly with the other Defendants, develops the infringing Xfinity services and equipment and provides infringing receivers to customers.

#### **IV. THE MANUFACTURER DEFENDANTS**

19. On information and belief, Arris International plc is a public liability company organized under the laws of England with a principal place of business at 3871 Lakefield Drive, Suwanee, GA 30024.

20. On information and belief, Arris Group Inc. is a Delaware corporation with a principal place of business at 3871 Lakefield Drive, Suwanee, GA 30024. On information and belief, Arris Group Inc. is a subsidiary of Arris International plc. On information and belief, on April 17, 2013, Arris Group Inc. (or a subsidiary of Arris Group Inc.) acquired the Motorola

Home business from Google Inc., which, among other things, included Motorola's set-top box business, which in turn included certain Motorola-branded Accused Products, as defined herein.

21. On information and belief, Arris Technology, Inc. is a Delaware corporation with a principal place of business at 101 Tournament Drive, Horsham, PA 19044. On information and belief, Arris Technology, Inc. is a subsidiary of Arris Group Inc.

22. On information and belief, Arris Enterprises LLC is a Delaware corporation with a principal place of business at 3871 Lakefield Drive, Suwanee, GA 30024. On information and belief, Arris Enterprises LLC is a subsidiary of Arris Technology, Inc.

23. On information and belief, Arris Solutions, Inc. is a Delaware corporation with a principal place of business at 3871 Lakefield Drive, Suwanee, GA 30024. On information and belief, Arris Solutions, Inc. is a subsidiary of Arris Enterprises LLC.

24. On information and belief, Pace Ltd. is a public liability company organized under the laws of England with a principal place of business at Victoria Road, Saltaire, West Yorkshire, BD18 3LF, England.

25. On information and belief, Pace Americas Holdings, Inc. is a Delaware corporation with a principal place of business at 3701 FAU Boulevard, Suite 200, Boca Raton, FL 33431. On information and belief, Pace Americas Holdings, Inc. is a subsidiary of Pace Ltd.

26. On information and belief, Pace Americas Investments, LLC is a Delaware limited liability company with a principal place of business at 3701 FAU Boulevard, Suite 200, Boca Raton, FL 33431. On information and belief, Pace Americas Investments, LLC is a subsidiary of Pace Americas Holdings, Inc.

27. On information and belief, Pace Americas, LLC is a Delaware limited liability company with a principal place of business at 3701 FAU Boulevard, Suite 200, Boca Raton, FL



33431. On information and belief, Pace Americas, LLC is a subsidiary of Pace Americas Investments, LLC.

28. On information and belief, on January 4, 2016, Arris acquired Pace. Accordingly, any reference to “Arris” herein includes reference to Pace.

29. Upon information and belief, the Arris Defendants have an indemnification obligation to the Comcast Defendants that extends to the patent infringement claims in this matter.

30. On information and belief, Technicolor SA is a corporation organized under the laws of France with a principal place of business at 1-5 Rue Jeanne d’Arc, 92130 Issy-les-Moulineaux, France. Upon information and belief, on November 20, 2015, Technicolor SA (or a subsidiary of Technicolor SA) acquired Cisco System Inc.’s Cisco Connected Devices division, which, among other things, included Cisco System Inc.’s set-top box business.

31. On information and belief, Technicolor USA, Inc. is a Delaware corporation with a principal place of business at 10330 North Meridian Street, Indianapolis, IN 46290. On information and belief, Technicolor USA, Inc. is a subsidiary of Technicolor SA.

32. On information and belief, Technicolor Connected Home USA LLC is a Delaware limited liability company with a principal place of business at 101 West 103rd Street, Indianapolis, IN 46290. On information and belief, Technicolor Connected Home USA LLC is a subsidiary of Technicolor USA, Inc.

33. On information and belief, Defendants operate jointly and collectively to provide to end user customers, and encourage and support the use of, the infringing Comcast Xfinity services and products, as described herein. On information and belief, to the extent the infringing acts involve activities of Comcast and Arris and/or Technicolor, Defendants’

infringement of the Asserted Patents is joint, as (1) there are express agreements between Comcast and Arris, and Comcast and Technicolor, which agreements relate to the design, manufacture, importation, distribution, and/or sale of the products accused of infringement herein; (2) there exists a common purpose between Comcast on the one hand, and Arris and Technicolor on the other, including relating to the distribution of the products accused of infringement herein and delivery of the Comcast Xfinity services to subscribers; (3) and there is a community of pecuniary interest in that the purpose among Defendants is to profit from the delivery and expansion of the Comcast Xfinity services and distribution of the products accused of infringement herein.

34. In addition, upon information and belief, Comcast exercises direction and control over Arris and Technicolor with respect to the manufacture, importation, sale for importation, and/or sale or lease after importation, of the products accused of infringement herein, by instructing Arris and Technicolor to make and import the products accused of infringement herein according to Comcast's specifications.

### **JURISDICTION AND VENUE**

35. This is an action arising under the patent laws of the United States, 35 U.S.C. §§ 1 et seq. Accordingly, this Court has subject matter jurisdiction pursuant to 28 U.S.C. §§ 1331 (federal question) and 1338(a) (action arising under an Act of Congress relating to patents). Venue is proper in this judicial district under 28 U.S.C. §§ 1391 and 1400(b).

36. More specifically, this action for patent infringement involves Defendants' manufacture, use, sale and/or lease, offer for sale and/or lease, and/or importation into the United States of infringing receivers, including set-top boxes (and their peripheral devices, such as remote control units), having hardware and software components, including, in particular,

interactive program guide (“IPG”) software, alone or in conjunction with Comcast servers and/or mobile applications (the “Accused Products”) that are used in and with Comcast’s Xfinity video services.

37. This action also involves Comcast’s attempts and offers to license, sell, or otherwise provide to other service providers, which are not licensed to the Asserted Patents, Comcast’s X1 IPG Product (an Accused Product), which is designed to practice one or more claims of the Asserted Patents, and which competes with Rovi’s own IPG products.

38. The Accused Products include Digital Video Recorder (“DVR”) receivers, including at least ARRIS-Motorola ACQ-XG1, ARRIS-Motorola MX011ANM, ARRIS-Motorola MX011BNM, ARRIS-Motorola AX013AN, ARRIS-Motorola XG5 (MG2404), Motorola DCH3416, Motorola DCH6416, Motorola DCT3400, Motorola DCT6208, Motorola DCT6412, Motorola DCX3400, Motorola RNG200N, Motorola DCX3400/M, Motorola DCX3501M, Motorola MOR200BN, Pace RNG200N, Pace TDC575D, Pace XG1, Pace XG1-P, Pace PX001ANC, Pace PX001ANM, Pace PX012ANM, Pace PX012ANC, Pace PX013ANM, Pace PX013ANC (manufactured by or on behalf of Arris); Cisco RNG200, Cisco Explorer 8540HDC/8550 HDC, Cisco RNG200N, Cisco Explorer 8652HDC, Scientific Atlanta 8300 (manufactured by or on behalf of Technicolor) (collectively, “Accused DVR Products”).

39. The Accused Products also include non-DVR receivers, including at least Motorola DCH100, Motorola DCH2300, Motorola DCH6200, Motorola DCH70, Motorola DCT700, Motorola DCT1800, Motorola DCT2000, Motorola DCT2500, Motorola DCT5100, Motorola DCT6200, Motorola DCX3200, Motorola RNG150, Motorola DCX3200M P2, Pace RNG110, Pace RNG150N, Pace PR150BNC, Pace PR150BNM X1, Pace RNG150N P2, Pace XG2, Pace Xi3, Pace XiD X1 (manufactured by or on behalf of Arris); and Cisco RNG100,

Cisco Explorer 1540C, Cisco RNG150, Cisco Explorer 1640HDC, Cisco RNG150N, Scientific Atlanta 4250 (manufactured by or on behalf of Technicolor) (collectively, “Accused Non-DVR Products”).

40. This Court has general and/or specific personal jurisdiction over Comcast Corporation and venue is proper, in part because Comcast Corporation, directly and/or in combination with its subsidiaries and/or through its agents, does continuous and systematic business in this district including by providing infringing products and services to residents of the Eastern District of Texas, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Comcast Corporation, directly or through its subsidiaries, places infringing products within the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. In addition, upon information and belief, Comcast Corporation, directly or through its subsidiaries, employs individuals within the Eastern District of Texas, including employees who provide infringing products and services to customers here, and maintains offices and facilities here. Comcast Corporation, directly or through its subsidiaries, operates highly commercial websites through which regular sales and/or leases of products and/or sales of services are made to customers in this district, including products and services that, on information and belief, infringe the Asserted Patents.

41. This Court has general and/or specific personal jurisdiction over Comcast Cable Communications, LLC and venue is proper, in part because Comcast Cable Communications, LLC, directly and/or in combination with other Comcast entities and/or through its agents, does continuous and systematic business in this district including by providing infringing products and

services to residents of the Eastern District of Texas, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Comcast Cable Communications, LLC, directly or through its subsidiaries, places infringing products within the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. In addition, upon information and belief, Comcast Cable Communications, LLC, directly or through its subsidiaries, employs individuals within the Eastern District of Texas, including employees who provide infringing products and services to customers here, and maintains offices and facilities here. Comcast Cable Communications, LLC, directly or through its subsidiaries, operates highly commercial websites through which regular sales and/or leases of products and/or sales of services are made to customers in this district, including products and services that, on information and belief, infringe the Asserted Patents.

42. This Court has general and/or specific personal jurisdiction over Comcast Cable Communications Management, LLC and venue is proper, in part because Comcast Cable Communications Management, LLC, directly and/or in combination with other Comcast entities and/or through its agents, does continuous and systematic business in this district including by providing infringing products and services to residents of the Eastern District of Texas, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Comcast Cable Communications Management, LLC, directly or through its subsidiaries, places infringing products within the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or

otherwise provided to customers within this district. In addition, upon information and belief, Comcast Cable Communications Management, LLC, directly or through its subsidiaries, employs individuals within the Eastern District of Texas, including employees who provide infringing products and services to customers here, and maintains offices and facilities here. Comcast Cable Communications Management, LLC, directly or through its subsidiaries, operates highly commercial websites through which regular sales and/or leases of products and/or sales of services are made to customers in this district, including products and services that, on information and belief, infringe the Asserted Patents.

43. This Court has general and/or specific personal jurisdiction over Comcast of Houston, LLC and venue is proper, in part because Comcast of Houston, LLC has a principal place of business in the state of Texas and because Comcast of Houston, LLC, directly and/or in combination with Comcast Corporation and/or other Comcast Corporation subsidiaries, and/or through its agents, does continuous and systematic business in this district including by providing infringing products and services to residents of the Eastern District of Texas, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Comcast of Houston, LLC, directly or through Comcast Corporation and/or other Comcast Corporation subsidiaries, has placed its products within the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. In addition, upon information and belief, Comcast of Houston, LLC, directly or through Comcast Corporation and/or other Comcast Corporation subsidiaries, has employed individuals within the

Eastern District of Texas, including employees who provide infringing products and services to customers here, and maintain offices and facilities here.

44. This Court has general and/or specific personal jurisdiction over the remaining Comcast Defendants and venue is proper, in part because said Defendants, directly and/or in combination with Comcast Corporation and/or other Comcast Corporation subsidiaries, and/or through their agents, do continuous and systematic business in this district including by providing infringing products and services to residents of the Eastern District of Texas, by providing infringing products and services that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district.

45. The Court has general and/or specific personal jurisdiction over Arris and venue is proper in part because, on information and belief, Arris does continuous and systematic business in this district by providing infringing products to residents of the Eastern District of Texas, by providing infringing products that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Arris places its Accused Products within the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. Upon information and belief, accused Arris receivers are provided to customers in the Eastern District of Texas. Arris operates a highly commercial and interactive website accessible to residents of the Eastern District of Texas that, among other things, permits customers to interact with Arris agents or representatives, including via live chat. In addition, Arris Group maintains offices and, on information and belief, employees, in Houston, TX. Further, Pace Americas LLC maintains offices in Austin, TX, which is home to Pace Americas West and consists of engineering and

services staff, and in San Antonio, TX, which is one of two customer care sites. Therefore, the exercise of jurisdiction over Arris will not offend traditional notions of fair play and substantial justice.

46. The Court has general and/or specific personal jurisdiction over Technicolor and venue is proper in part because, on information and belief, Technicolor does continuous and systematic business in this district by providing infringing products to residents of the Eastern District of Texas, by providing infringing products that it knew would be used within this district, and/or by participating in the solicitation of business from residents of this district. In addition, upon information and belief, Technicolor places its Accused Products within the stream of commerce, which is directed at this district, with the knowledge and/or understanding that such products will be sold, leased, or otherwise provided to customers within this district. Upon information and belief, accused Technicolor receivers are provided to customers in the Eastern District of Texas. Technicolor operates a highly commercial and interactive website accessible to residents of the Eastern District of Texas that, among other things, permits customers to contact Technicolor agents or representatives. Therefore, the exercise of jurisdiction over Technicolor will not offend traditional notions of fair play and substantial justice.

### **FACTUAL BACKGROUND**

#### **I. ROVI'S HISTORY OF INNOVATION AND COMMERCIAL SUCCESS**

47. Since launching TV Guide Magazine in 1953, the Rovi family of companies (which includes, through mergers, joint ventures, and acquisitions, United Video, TV Guide Onscreen, StarSight Telecast, Prevue, TV Guide, Video Guide, Gemstar, GuideWorks, Aptiv Digital, Macrovision, Veveo, and FanTV) has been a pioneer and recognized leader in media technology, including the technology used to facilitate consumer access to television and other audiovisual media. Today, Rovi's market leading digital entertainment solutions enable the



proliferation of access to media on electronic devices; these solutions include products and services related to interactive program guides (“IPGs”) and other content discovery solutions, personalized search and recommendation, advertising and programming promotion optimization, and other data and analytics solutions to monetize interactions across multiple entertainment platforms. Rovi’s solutions are used by companies worldwide in applications such as cable, satellite, and internet protocol television (“IPTV”) receivers (including digital television set-top boxes (“STBs”) and digital video recorders (“DVRs”)); PCs, mobile, and tablet devices; and other means by which consumers connect to entertainment.

48. In particular, Rovi has developed the substantial majority of the pioneering advances in IPG technology and related functionality for subscription-based television broadcasting (“Pay-TV”).

49. In 1981, one of the Rovi family of companies introduced one of the first, if not the first, on-screen electronic program guide (“EPG”). This EPG, displayed on a dedicated cable channel, allowed Pay-TV providers to provide scrolling on-screen television listings to their customers throughout the day. Rovi’s early EPG product was widely adopted by North American cable systems, and became the way in which consumers discovered the content they desired.

50. In the late 1980s, another one of the Rovi family of companies invented the VCR Plus®, which significantly simplified programming of videocassette recorders, enabling television subscribers to more easily record the content they desired. VCR Plus® was a resounding success, and helped establish the Rovi family of companies as the frontrunner in the program guide industry by broadly licensing its VCR Plus® product and related technologies.

51. Around 1994, another of the Rovi family of companies launched the first IPG services designed for use in Pay-TV television receivers. These early IPGs were full-screen grid guides that displayed television program listings by time and channel in a two-dimensional grid. Using a remote control, a user could interact with the guides to see, for example, what was on television at a later time or on a different channel, instead of depending on the automated scrolling of a traditional on-screen guide.

52. In 2004, Rovi's immediate predecessor-in-interest launched the i-Guide®, one of the first IPGs that provided for dual tuner support. Rovi's i-Guide®, which Rovi continues to offer to this day, allows users to watch and record programs simultaneously, providing users at the time with unprecedented convenience in the television viewing experience.

53. Rovi's IPG technologies today allow for multi-screen entertainment across a variety of user devices (e.g., seamless access to the same media from multiple devices and device types, like a television and mobile device), and provide customizable listings for televisions, receivers, game consoles, and mobile devices, thereby allowing consumers to find, discover, and enjoy the content they want, when they want it, and where they want to access it. These and other innovations help users navigate an increasingly overwhelming amount of content, and discover and access entertainment they desire on virtually any platform or device.

54. To maintain Rovi's leadership position in this industry, Rovi has invested and continues to invest significant resources in the design, development and licensing of its IPGs and related technologies used by television service providers (as well as others in the digital entertainment industry). Since 2013 alone, Rovi has invested over \$300 million in research and development. Furthermore, Rovi has over 800 U.S.-based, full-time employees supporting the development of new products and platforms.

55. Rovi has incorporated its technological innovations resulting from its significant research and development into its commercial products. For example, Rovi's i-Guide® and Passport® Guide are IPGs that provide comprehensive listings, intuitive search capabilities, advanced DVR and Video on Demand functionality, and HD support. Similarly, Rovi's TotalGuide xD is an advanced IPG for mobile devices, which allows consumers to find their favorite programs, tune channels, and manage their DVRs remotely.

56. The value of Rovi's innovative solutions has been recognized by numerous leading Pay-TV service providers, who license these technologies and solutions from Rovi. All told, as of December 31, 2015, Rovi's technology was used by over 184 million subscribers worldwide.

57. Rovi's innovative IPG related technologies have been recognized through numerous industry awards and accolades. For example, in 2012 Rovi was awarded a Technology and Engineering Emmy® Award for its "Pioneering On-Screen Interactive Program Guides" that assist "viewer[s] in rapidly locating their desired program." These Emmy® awards are designed to recognize "developments . . . involved in engineering technologies which either represent so extensive an improvement on existing methods or are so innovative in nature that they materially have affected the transmission, recording, or reception of television."<sup>1</sup>

58. Rovi's history of innovation is also reflected in the extensive patent coverage that Rovi has obtained for its inventions. This portfolio, which includes more than 5,400 issued or pending patents worldwide, is a direct result of Rovi's substantial and ongoing investment in research and development. The Asserted Patents are reflective of this history of innovation, embodying a number of firsts in the development of IPG-related technologies.

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<sup>1</sup> Technology & Engineering, The National Academy of Television Arts & Sciences, <http://emmyonline.com/tech> (last visited Mar. 28, 2016).

59. Rovi's current commercial products, including in particular its i-Guide®, Passport® Guide, and TotalGuide xD IPG solutions, all embody Rovi's patented technology, including the Asserted Patents.

60. The strength of Rovi's patent portfolio has been recognized by the entertainment industry. In particular, all major U.S. Pay-TV providers, including Comcast, as well as AT&T (which recently acquired DirecTV), Verizon, Time Warner Cable, and Dish/EchoStar, among others, have acknowledged the value of Rovi's innovations by taking licenses from Rovi for its patents covering these innovations. Rovi has also licensed its patent portfolio to many leading content providers, including both traditional media (cable, satellite, IPTV) and new media (online, mobile) video providers, as well as manufacturers and distributors of receivers and other consumer electronic devices.

61. Rovi's long-term financial success depends in part on its ability to establish, maintain, and protect its proprietary technology through patents. Defendants' infringement presents significant and ongoing damages to Rovi's business.

## **II. COMCAST HAS LONG BENEFITED FROM ITS USE OF ROVI'S PATENTED TECHNOLOGIES**

62. Prior to Comcast first licensing Rovi's patents, it measured business success with reference to how many subscribers it had. Comcast did not historically measure its business success by the quality of the services it provided to its customers. Comcast touted itself in its 2002 10K as being the "largest cable operator in the United States."

63. Nonetheless, beginning in or around 2004, Comcast began attributing revenue growth to its "advanced services" including video-on-demand ("VOD") and digital-video-recording ("DVR"). Comcast recognized that its future business success depended on product

differentiation from both other cable operators and satellite providers—product differentiation that offering advanced services to its customers provided.

64. In 2004, to secure the growth in its “advanced services,” Comcast entered into a license agreement with Gemstar (a forerunner to Rovi) (“2004 Agreement”) which Comcast in SEC filings described as an effort “to acquire and develop technology that will drive product differentiation and new applications and extend our nationwide fiber-optic network<sup>2</sup> and enhance Comcast’s IPG platform to improve Comcast’s ability to compete with its competitors. Importantly, the 2004 Agreement was not a sale of technology from Gemstar to Comcast by which Comcast “acquired” the technology from Gemstar; it was a license for a fixed term during which Comcast had permission from Gemstar to use that technology for specific purposes, and only until the license expired. The 2004 Agreement included a Joint Venture with Gemstar called Guideworks, under which Gemstar would help Comcast develop a next generation IPG platform, as well as a license to Gemstar’s guidance patent portfolio.

65. Comcast’s use of Rovi’s (then Gemstar’s) technology to develop and enhance interactive program guides to be offered by Comcast is evidenced, among other ways, by Comcast’s description of the 2004 Agreement in the Comcast 2006 10K SEC filing. Comcast stated, “This [2004 Agreement] allows us to utilize Gemstar’s intellectual property and technology and the TV Guide brand and content on our interactive program guides. . . . In addition, we and Gemstar formed an entity to develop and enhance interactive programming guides.”<sup>3</sup>

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<sup>2</sup> <http://www.secinfo.com/dVut2.z4Ag.htm> (last visited Apr. 25, 2016)

<sup>3</sup> [http://www.secinfo.com/\\$/SEC/Filings.asp?CIK-1166691&Find=Rovi+%7C=Macrovision+%7C+Gemstar&Page=All&List=Hits&Show=Each>](http://www.secinfo.com/$/SEC/Filings.asp?CIK-1166691&Find=Rovi+%7C=Macrovision+%7C+Gemstar&Page=All&List=Hits&Show=Each>)

66. In order to further secure improved products and services, in 2004, “Comcast sign[ed] strategic agreements with Gemstar-TV Guide and Microsoft to develop enhancements to the user interface and the functionality of its service offerings.”<sup>4</sup>

67. Comcast’s 10K SEC filings from 2004 to date consistently evidence Comcast’s recognition of the importance to its profitability and success of the technology needed to provide advanced services in connection with its digital cable and high-speed internet services, including video on demand (“VOD” or “On Demand”), high-definition television (“HDTV”) programming and digital video recorders (“DVR”s). In fact, in its 2004 10K, Comcast noted that its “subscriber growth is attributable to new and improved products and advanced services in our digital cable and high-speed Internet services.”<sup>5</sup> That recognition in each filing thereafter is repeatedly evidenced by both Comcast’s description of the reasons for its revenue growth and, correspondingly, its description of the risk factors that confront Comcast. Increased competition from telecommunications providers, ISPs, and satellite companies in the provision and delivery of new and advanced services was and since 2004 has been one of Comcast’s greatest competitive concerns.

68. Rovi is informed and believes that the technology Rovi made available to Comcast during the term of the 2004 Agreement was foundational to Comcast’s ability from 2004 to the present to offer new and advanced services, to grow its business, and to develop its own interactive program guide and advance service platforms, and throughout that period Comcast personnel were aware of these facts.

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<sup>4</sup> See Comcast Timeline, <http://corporate.comcast.com/news-information/timeline> (last visited Mar. 30, 2016).

<sup>5</sup> See Comcast Annual Report 2004 at 20, <http://apps.shareholder.com/sec/viewerContent.aspx?companyid=CMCSA&docid=3492536> (last visited Mar. 31, 2016).

69. In 2010, Comcast and Rovi terminated their Joint Venture, while at the same time, Comcast reaffirmed its need for Rovi technology by entering into an expanded patent license agreement with Rovi. Indeed, Rick Rioboli, SVP, Comcast Metadata Products and Search Services, remarked that “Rovi has been a very important partner of ours for many years.”

70. In 2012, during the pendency of its soon-to-expire License to Rovi’s patents, Comcast launched the X1 IPG Product, which it describes as “a cloud-enabled video platform that transformed the TV into an interactive, integrated entertainment experience.”<sup>6</sup>

71. In 2014, also during the pendency of its soon-to-expire License to Rovi’s patents, Comcast introduced the next generation of its X1 IPG Product, which it describes as “designed to make navigation, search and discovery of content easier and quicker than ever before. The X1 IPG Product gives customers an interactive TV experience, providing instant access to all of their Entertainment.”<sup>7</sup>

72. As set forth herein, Comcast’s X1 IPG Product is designed to and does infringe at least one claim of each of the Asserted Patents.

73. Comcast has an installed base of more than 10 million X1 users and is continuing to market that product throughout the United States in an attempt to further expand the reach of its X1 IPG Product.

74. Even today, Comcast recognizes the critical role that its infringing IPG platform has in driving product differentiation and consumer demand for its products and services. For example, Comcast recently explained to the FCC that “the interface is how MVPDs [multichannel video program distributors] . . . differentiate themselves in a highly competitive

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<sup>6</sup> Our Story, Comcast, <http://corporate.comcast.com/our-company/our-story> (last visited Mar. 30, 2016).

<sup>7</sup> Our Story, Comcast, <http://corporate.comcast.com/our-company/our-story> (last visited Mar. 30, 2016).

marketplace.”<sup>8</sup> Comcast further explained that, “[f]aced with fierce competition, providers are intent on giving consumers the flexibility they demand to access video programming on the devices of their choice, and delivering more value to customers.”<sup>9</sup>

### **III. COMCAST AND ROVI ARE HORIZONTAL COMPETITORS IN THE DEVELOPMENT AND PROVISION OF IPG SOLUTIONS**

75. Comcast markets and sells its Accused Products, including the X1 IPG Product, in the United States.

76. Comcast describes its Accused Products, including the X1 IPG Product, as delivering the simplest, fastest and most complete way to access all your entertainment on all your screens. Comcast explains that with its Accused Products, including the X1 IPG Product, a user experiences TV and Internet together like never before with advanced search, personalized recommendations, apps at home and on the go and the fastest in-home WiFi for all rooms, all devices, all the time.

77. Rovi also markets and sells innovative guide products that compete with Comcast’s Accused Products, including the X1 IPG Product, in the United States.

78. Since 1981, Rovi has evolved the traditional grid-based TV guide to meet consumer expectations. Today it is no longer sufficient to simply offer scheduling information; guides must be a wellspring of “six degrees” content integrating program information, personalized recommendations, related Internet resources and social media for various devices.

79. To meet these goals, Rovi’s Connected Guides, including next-generation, cloud-based components of Rovi’s Connected Guide Solution, offer a global, multi-screen entertainment offering for service providers and application developers. These lightweight

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<sup>8</sup> <http://corporate.comcast.com/images/2016-04-22-AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf> (last visited Apr. 23, 2016).

<sup>9</sup> *Id.*



guides provide customizable listings for TVs, set-top boxes, game consoles, mobile devices and websites, so consumers can find and discover content when and where they want.

80. Rovi's Connected Guide Products compete with Comcast's Accused Products, including the X1 IPG Product, in the IPG market in the United States.

81. For example, Cox Communications has, for the past several years, licensed Rovi's Passport Guide IPG platform, which Cox has deployed to millions of subscribers. Similarly, Cequel III Programming, LLC d/b/a Suddenlink Communications ("Suddenlink") has, for the past several years, licensed Rovi's i-Guide IPG platform, which Suddenlink has deployed to hundreds of thousands of subscribers. On information and belief, Comcast has marketed its X1 IPG Product to both Cox and Suddenlink, and Cox has begun deploying the X1 platform to its customers.

82. Even today, Comcast recognizes the critical role that its infringing IPG platform has in driving product differentiation and consumer demand for its products and services. For example, Comcast recently explained to the FCC that "the interface is how MVPDs [multichannel video program distributors] . . . differentiate themselves in a highly competitive marketplace."<sup>10</sup> Comcast further explained that, "[f]aced with fierce competition, providers are intent on giving consumers the flexibility they demand to access video programming on the devices of their choice, and delivering more value to customers."<sup>11</sup>

83. On March 31, 2016 Comcast's license to use the Rovi technology expired. Comcast has refused to execute a new license, yet continues to practice the inventions claimed in Rovi's patents, and continues to offer and sell the X1 product and enhanced IPG platform that

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<sup>10</sup> <http://corporate.comcast.com/images/2016-04-22-AS-FILED-Comcast-DSTAC-STB-NPRM-Comments.pdf> (last visited Apr. 23, 2016).

<sup>11</sup> *Id.*

not only infringes Rovi's patents, but could not and would not ever have been lawfully developed but for the permitted use by Comcast of Rovi's technology granted in the 2004 Agreement.

**IV. COMCAST IGNORED ROVI'S PATENT RIGHTS EVEN DURING THE PERIOD COMCAST HAS BEEN A ROVI LICENSEE**

84. Comcast's License did not include the right for Comcast to make, license, sell, or otherwise transfer products, such as the X1 IPG Product, that practice or are designed to practice Rovi's patents, for use in products or services not owned by Comcast or Comcast affiliates.

85. Nevertheless, on information and belief, Comcast is and has been actively marketing its X1 IPG Product, which is designed to practice claims of the Asserted Patents, to other Pay-TV service providers, which service providers do not themselves have an appropriate patent license from Rovi, for use in those service providers' systems and set-top boxes deployed to subscribers. On information and belief, one example of such a service provider is Suddenlink.

86. While Suddenlink has licensed Rovi's i-Guide IPG product from Rovi, Suddenlink does not have a patent license from Rovi that would permit Suddenlink to use Comcast's X1 IPG Product in connection with the set-top boxes Suddenlink provides to its subscribers. On information and belief, Comcast knows these facts, but has continued to market its competing X1 IPG Product to Suddenlink, as well as to other service providers.

87. In addition, Comcast's X1 IPG Product is built upon the Reference Design Kit ("RDK") platform. "Comcast's RDK [is] an integrated software package providing a common platform for managing cable television equipment located at the consumers' homes, including

set-top boxes, DVRs and home gateways.”<sup>12</sup> The RDK enables “potential hardware partners to build their own versions of Comcast’s next generation setup.”<sup>13</sup>

88. Upon information and belief, to encourage adoption of Comcast’s X1 IPG Product by others, Comcast established, promoted the existence of, and continues to promote the RDK. With the pending expiration of its License, and in an attempt to devalue Rovi’s patent portfolio while simultaneously seeking to strengthen its own bargaining position, in 2013 Comcast (together with Time Warner Cable) formed the Reference Design Kit (RDK) Consortium.

89. In addition to marketing its X1 IPG Product to other Pay-TV providers, on information and belief, Comcast has continued to promote its infringing products and services even after filing of the original Complaint in this action by announcing, on April 20, 2016, the launch of its Xfinity TV Partner Program, in order to encourage and enable television and consumer electronics companies to implement Comcast’s Xfinity IPG app, which “will provide access to [Comcast’s] TV cable service, . . . live and on demand programming and cloud DVR recordings, and will be available on partners’ smart TVs, TV-connected devices, and other IP-enabled video devices.”<sup>14</sup> Comcast will “provide consumers with a capability to search through Comcast’s video assets from a device’s user interface with playback of a selected asset via the

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<sup>12</sup> *In re Comcast Corp., Time Warner Cable Inc., Charter Commc’ns, Inc., & SpinCo to Assign & Transfer Control of FCC Licenses & Other Authorization*, MB Dkt. No. 14-57, Comments of Broadcom Corp. (Aug. 18, 2014), available at <http://apps.fcc.gov/ecfs/document/view?id=7521773052>.

<sup>13</sup> Richard Lawler, *Humax’s take on an IP-connected TV box for Comcast passes through the FCC*, ENGADGET (Nov. 28, 2012), <http://www.engadget.com/2012/11/28/comcast-humax-xi3-h-ip-cable-box/>.

<sup>14</sup> Mark Hess, *Comcast Seeks TV and Other Consumer Electronics Partners to Bring Xfinity TV Cable Service to More Retail Devices*, COMCAST VOICES (Apr. 20, 2016), <http://corporate.comcast.com/comcast-voices/comcast-seeks-partners-to-bring-xfinity-tv-cable-service-to-more-retail-devices>.

Xfinity TV Partner app.”<sup>15</sup> “The Xfinity TV Partner App can be easily implemented by any company whose consumer electronics device supports HTML5 and other compatibility requirements.”<sup>16</sup>

90. On information and belief, Comcast will continue to market its X1 IPG Product and Xfinity TV Partner Program to its customers as well as to other Pay-TV providers (including Pay-TV providers that do not have a license to Rovi’s patents) and consumer electronics manufacturers. Comcast will continue to do so in competition (directly and indirectly) with Rovi’s own patent-protected IPG products. Time Warner Cable, on the other hand, recently renewed its license agreement with Rovi.

91. DEFENDANTS’ INFRINGING PRODUCTS, SERVICES AND ACTIVITIES

92. On information and belief, Comcast is in the business of providing digital video, audio, and other content services to customers under the name “Xfinity.” Comcast provides subscribers to its subscription digital services with at least one Accused Product that is necessary for the receipt of such services.

93. On information and belief, Xfinity products and services are provided to consumers through the coordinated and combined participation of Defendants and/or under Defendants’ instruction, direction, and/or control. Directly and/or indirectly, Comcast Corporation owns regional subsidiaries that provide telecommunications and video services to customers in a number of states. Xfinity services have been made available to consumers through at least the following regional subsidiaries owned, directly or indirectly, by Comcast

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<sup>15</sup> *Id.*

<sup>16</sup> *Id.*; see also Comcast, *The Xfinity TV Partner Program: Bringing the Xfinity Experience to More Consumer Devices and TV Screens*, <https://developer.xfinity.com/cableapp> (last visited Apr. 23, 2016); Comcast, *The Xfinity TV Partner Program Frequently Asked Questions*, <https://developer.xfinity.com/cableapp/moreinfo> (last visited Apr. 23, 2016).

Corporation: Comcast of Arkansas/Florida/Louisiana/Minnesota/Mississippi/Tennessee, Inc.; Comcast of Boston, Inc.; Comcast of California II, LLC; Comcast of California III, Inc.; Comcast of California IX, Inc.; Comcast of California/Colorado, LLC; Comcast of California/Colorado/Florida/Oregon, Inc.; Comcast of California/Colorado/Illinois/Indiana/Michigan, LP; Comcast of California/Maryland/Pennsylvania/Virginia/West Virginia, LLC; Comcast of California/Massachusetts/Michigan/Utah, LLC; Comcast of Colorado IX, LLC; Comcast of Colorado/Florida/Michigan/New Mexico/Pennsylvania/Washington, LLC; Comcast of Colorado/Pennsylvania/West Virginia, LLC; Comcast of Connecticut, Inc.; Comcast of Connecticut/Georgia/Massachusetts/New Hampshire/New York/North Carolina/Virginia/Vermont, LLC; Comcast of Florida/Georgia/Illinois/Michigan, LLC; Comcast of Florida/Georgia/Pennsylvania, L.P.; Comcast of Garden State, L.P.; Comcast of Houston, LLC; Comcast of Illinois VI, Inc.; Comcast of Illinois/Indiana/Ohio, LLC; Comcast of Maine/New Hampshire, Inc.; Comcast of Maryland, LLC; Comcast Cable of Maryland, LLC; Comcast of Massachusetts I, Inc.; Comcast of Massachusetts II, Inc.; Comcast of Massachusetts III, Inc.; Comcast of Massachusetts/New Hampshire, LLC; Comcast of New Jersey II, LLC; Comcast of Oregon II, Inc.; Comcast of Philadelphia II, LLC; Comcast of Potomac, LLC; Comcast of South Jersey, LLC; Comcast of Southeast Pennsylvania, LLC; Comcast of the South; Comcast of Utah II, Inc.; and Mile Hi Cable Partners, LP (collectively, “regional subsidiaries”).

94. Upon information and belief, Comcast Corporation and its regional subsidiaries hold themselves out as a single entity in providing the infringing Xfinity products and services. Comcast’s various Xfinity services are centrally advertised, documented, and explained on the website, [www.xfinity.com](http://www.xfinity.com). Upon information and belief, the Comcast regional subsidiaries use

identical contracts and other documents in the provision of the infringing Comcast Xfinity products and services that are generated and approved by Comcast Corporation and/or collectively by the aforementioned regional subsidiaries. For example, Comcast Xfinity TV services have the same “Residential Services Policies” for residential customers, regardless of their location.<sup>17</sup>

95. Upon information and belief, acting through one or more of its officers and/or its board of directors, Comcast Corporation has: (a) approved and authorized the development by designated Comcast Corporation subsidiaries of the technology and infrastructure necessary to offer the Xfinity service to the consuming public; (b) approved and authorized the capital expenditures by its subsidiaries necessary to provide the Xfinity service to consumers; and/or (c) authorized and directed its regional subsidiaries to provide the Xfinity service under the Comcast brand to consumers in their operating areas. Comcast Corporation further directed and controlled the activities of its regional subsidiaries. In doing so, Comcast Corporation (together with the remaining Defendants) actively induced the infringement of such subsidiaries.

96. Comcast markets the Xfinity service to subscribers of each of the regional subsidiaries described above, including subscribers of Comcast of Houston, LLC in the Eastern District of Texas, and actively solicits their business through Comcast’s website.

97. Upon information and belief, Comcast has been involved in the design, testing, and implementation of the Xfinity service. Upon information and belief, Comcast provides overall management and coordination of the elements of the network used to deliver Comcast’s Xfinity services, and of the regional subsidiaries that own and operate those elements.

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<sup>17</sup> See Xfinity Terms of Service, Comcast, <http://my.xfinity.com/terms/> (last visited Mar. 28, 2016).

98. In addition, Comcast has caused and directed at least the regional subsidiaries to engage in activities, including those activities described above, that have resulted in the infringement of one or more claims of the Asserted Patents. In performing the activities that, either individually or in combination, have infringed one or more claims of the Asserted Patents, the regional subsidiaries have acted as agents of at least Comcast Corporation, and their infringing activities have been within the course and scope of that agency.

99. Upon information and belief, Comcast does not manufacture the set-top boxes that it provides to Xfinity customers. Upon information and belief, Comcast's set-top boxes are purchased from Arris and Technicolor.

100. Comcast set-top boxes contain, or are designed to receive and execute, software (including IPG software) enabling a Comcast subscriber to infringe the Asserted Patents. Upon information and belief, such software has been installed on the receivers before being provided to end-user customers. Upon information and belief, the receivers are specifically manufactured to be combined with such software for use in Comcast's service infrastructure. Comcast leases and/or otherwise provides to its subscribers these receivers along with user guides and manuals describing how to use the receivers and their associated features. In addition, Comcast provides for download free of charge mobile applications intended to be used with its Xfinity services, including for controlling DVR and program guide functionality, as well as software updates for its receivers.

101. Rovi is informed and believes that Comcast has engaged in activities which promote the use and distribution of the X1 IPG Product and the Xfinity services and thereby encourages the infringement of Rovi's patents so long as Comcast remains unlicensed by Rovi. Those activities include, among others, its development, creation, and promotion of the RDK

software by which developers are encouraged, in an open source platform, to develop new applications that will run on set top boxes and other consumer premise equipment (CPE) loaded with Comcast's X1 IPG product and Xfinity services technology (which infringe Rovi's patents).

102. Rovi is informed and believes that, in or before 2012, Comcast was considering ways (a) to promote the adoption of its X1 IPG platform, which extensively utilizes Rovi's patented technology, as an industry standard; (b) to have new applications and enhancements to its platform developed; and (c) to avoid the R&D cost of developing such new applications and enhancements. The solution to meet those three goals was for Comcast to develop a reference design kit, which was a defined stack of software on one layer of an operating set top box, that would be "open-source" and available to all developers and vendors to create further enhancements and applications that could run on that software, and Comcast's products.

103. Comcast is the founder and key developer of the Reference Design Kit. "Comcast's RDK is an integrated software package providing a common platform for managing cable television equipment located at the consumers' homes, including set-top boxes, DVRs and home gateways."<sup>18</sup> The RDK enables "potential hardware partners to build their own versions of [Comcast's] next generation setup."<sup>19</sup>

104. Through the RDK, Comcast "work[s] closely with STB manufactures and silicon suppliers during their early design phase and chipset prototype production in order to minimize

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<sup>18</sup> *In re Comcast Corp., Time Warner Cable Inc., Charter Commc'ns, Inc., & SpinCo to Assign & Transfer Control of FCC Licenses & Other Authorization*, MB Dkt. No. 14-57, Comments of Broadcom Corp. (Aug. 18, 2014), available at <http://apps.fcc.gov/ecfs/document/view?id=7521773052>.

<sup>19</sup> Richard Lawler, *Humax's take on an IP-connected TV box for Comcast passes through the FCC*, ENGADGET (Nov. 28, 2012), <http://www.engadget.com/2012/11/28/comcast-humax-xi3-h-ip-cable-box/>.



development cycles. In fact, STB suppliers can now take a new chip from RDK-integrated silicon vendors and have a working STB design in days.”<sup>20</sup>

105. Comcast also works and has worked directly with System on Chip (“SoC”) manufacturers “to get the RDK up and running on those chip platforms before they even started building the [set-top] box around th[eir] chip.”<sup>21</sup>

106. Through the promotion of the RDK, Comcast has made significant “effort[s] to get vendors such as original equipment manufacturers (OEMs), semiconductor manufacturers, software vendors, software integrators and multichannel video programming distributors to create an ecosystem for new gear for . . . Comcast’s X1 service.”<sup>22</sup>

107. “The RDK is supported by more than 200 licensees including CE [consumer electronics] and SoC [System on Chip] manufactures. . . .”<sup>23</sup>

108. Through at least the promulgation of the Comcast RDK, Comcast is directly involved in the design and manufacture of the receivers, including set-top boxes, onto which the infringing Comcast interactive program guides are loaded.

109. Comcast purchases significant quantities of receivers, including set-top boxes, from third parties, including the Manufacturer Defendants.

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<sup>20</sup> Steve Heeb, *Looking Back At RDK In 2015: Driving Speed And Innovation*, VIDEONET, <http://www.v-net.tv/looking-back-at-rdk-in-2015-driving-speed-and-innovation> (last visited Mar. 28, 2016).

<sup>21</sup> Mike Robuck, *Built for speed: Comcast RDK*, CED MAGAZINE (July 5, 2012, 12:41 PM), <http://www.cedmagazine.com/article/2012/07/built-speed-comcast-rdk> (quoting Comcast’s Steve Reynolds, senior vice president of CPE and home networking).

<sup>22</sup> News and Events, Pace licenses RDK set-top design kit from Comcast, RDK CENTRAL, <http://rdkcentral.com/pace-licenses-rdk-set-top-design-kit-from-comcast/> (last visited Mar. 28, 2016); see Deborah D. McAdams, *Motorola Mobility Licenses Comcast RDK*, TVTECHNOLOGY (Aug. 22, 2012), <http://www.tvtechnology.com/news/0002/motorola-mobility-licenses-comcast-rdk/215089>.

<sup>23</sup> About RDK, RDK CENTRAL, <http://rdkcentral.com/about-rdk/> (last visited Mar. 28, 2016).

110. As of October 2014, Comcast had “deployed about 5 million X1 boxes,” and was “‘on track’ to have the majority of its customers on X1 within three years [i.e., by 2017].”<sup>24</sup>

111. “All of Comcast’s X1-class [set-top] boxes are based on the Reference Design Kit (RDK).”<sup>25</sup>

112. These third parties manufacture and/or assemble these devices at manufacturing facilities located outside the United States on Comcast’s behalf and in accordance with the software and specifications provided as part of the RDK.

113. Comcast has had and continues to have significant involvement in the importation and distribution of these Comcast receivers, including by causing the manufacture and importation of these Comcast receivers to occur through the promulgation of the Comcast RDK; the ordering and purchase of such receivers from third party manufacturers, which receivers would not have been made or imported into the United States otherwise; and the subsequent delivery of such receivers to its subscriber base.

114. On account of Comcast’s involvement in the design and development of the RDK from the chip stage onward, Comcast has held itself out as the “supplier” of its receivers, including its set-top boxes that it distributes to its subscribers. For example, in connection with the FCC filing made by Comcast relating to the potential merger of Comcast and Time Warner,

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<sup>24</sup> Jeff Baumgartner, *Comcast: 5 Million X1 Boxes Deployed*, MULTICHANNEL NEWS (Oct. 23, 2014, 11:00 AM), <http://www.multichannel.com/news/tv-apps/comcast-5-million-x1-boxes-deployed/384990>; see News and Events, Comcast: 5 Million X1 Boxes Deployed, RDK CENTRAL (Oct. 23, 2014), <http://rdkcentral.com/comcast-5-million-x1-boxes-deployed/>.

<sup>25</sup> Jeff Baumgartner, *Comcast Starts To Deploy IP-Only Boxes For X1*, MULTICHANNEL NEWS (Oct. 28, 2014, 4:00 PM), <http://www.multichannel.com/news/technology/comcast-starts-deploy-all-ip-boxes-x1/385122>.

Comcast repeatedly referred to “Comcast-supplied set-top boxes,” and characterized set-top boxes used in connection with the X1 IPG Product as “Comcast’s.”<sup>26</sup>

115. These Comcast receivers contain, or are designed to receive and execute, software (including IPG software) enabling a Comcast subscriber to view, record, and control television broadcasts; connect to and interact with Comcast’s service infrastructure and download data, software, and content; and receive an array of digital video, audio, and other content. Comcast designs the infringing IPG software that is loaded onto such receivers (and for which purpose such receivers were designed).

116. Such software is installed on the receivers before importation into the United States, or is installed on the accused receivers in the United States after importation but before being provided to end-user customers. Upon information and belief, the receivers are specifically manufactured, in accordance with the RDK, to be combined with such software for use in Comcast’s service infrastructure.

117. On information and belief, Xfinity products and services are provided to consumers through the coordinated and combined participation of Defendants and/or under Defendants’ instruction, direction, and/or control.

### **FIRST CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 8,006,263**

118. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-117 of this Complaint.

119. The ’263 Patent is valid and enforceable under United States Patent Laws.

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<sup>26</sup> See generally, e.g., *In re Comcast Corp.*, MB Dkt. No. 14-57, Opp’n to Pets. to Deny & Resp. to Comments (Sept. 23, 2014), available at <http://apps.fcc.gov/ecfs/document/view?id=7522909787>.

120. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '263 Patent, including the right to collect for past damages.

121. A copy of the '263 Patent is attached as Exhibit A.

122. The original provisional applications that led to the issuance of the '263 Patent were filed on August 21, 1998 and July 17, 1998.

123. On October 5, 2015, a notice of allowance was mailed in the prosecution of U.S. Application No. 13/195,678 (now U.S. Patent No. 9,204,184), which claims the benefit of the same priority applications as the '263 Patent.

#### **I. THE '263 PATENT**

124. The '263 Patent discloses, among other things, “[a]n interactive television program guide with remote access . . . [that] is implemented on interactive television program guide equipment,” and wherein “[a] remote program guide access device is connected to the interactive television program guide equipment by a remote access link to provide a user with remote access to program guide functions.” '263 Patent at Abstract. “The remote access interactive television program guide may communicate with the [‘local’] interactive television program guide that is implemented on interactive television program guide equipment” in order to, *inter alia*, remotely record a program on the local interactive television program guide (“IPG”) equipment. '263 Patent at 12:25-29, 17:54-62.

125. Figure 1 of the '263 Patent “is a schematic block diagram of an illustrative system in accordance with the present invention.” '263 Patent at 3:45-46.

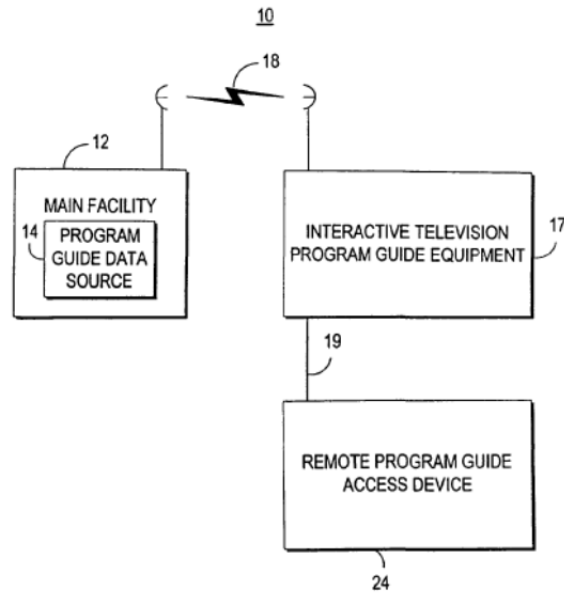


FIG. 1

“Main facility 12 provides interactive television program guide data from program guide data source 14 to interactive television program guide equipment 17 via communications link 18. There are preferably numerous pieces or installations of interactive television program guide equipment 17.” ’263 Patent at 4:30-35. The main facility 12 transmits program guide data to interactive television program guide equipment 17, which “may include television program listings data (e.g., program times, channels, titles, and descriptions).” ’263 Patent at 4:40-43. The IPG equipment may be connected to remote program guide access device 24 via remote access link 19. ’263 Patent at 7:46-49.

126. “FIGS. 2a-2d show illustrative arrangements for the interactive television program guide equipment and remote program guide access device of FIG. 1 in accordance with the principles of the present invention.” ’263 Patent at 3:47-50. As shown in, e.g., Figure 2b, the ’263 Patent discloses that IPG equipment 17 may comprise a television distribution facility with program guide distribution equipment 21 and a communications device 27 as well as user television equipment 22. ’263 Patent at 4:57-61.

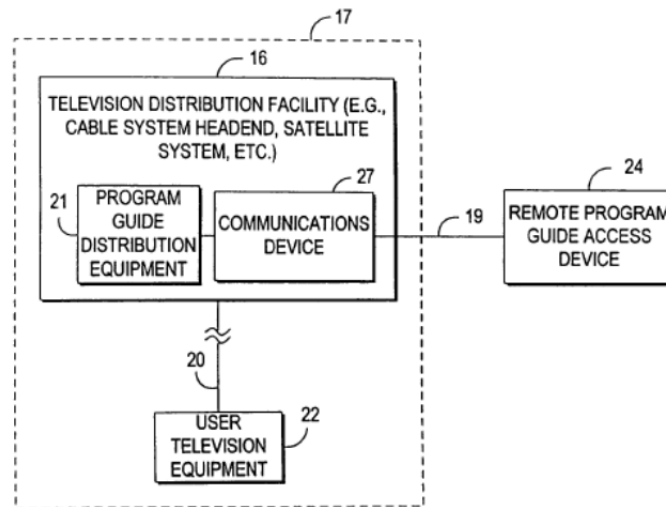


FIG. 2b

The “[t]elevision distribution facility 16 may distribute program guide data that it received from main facility 12 to multiple users via communications path 20.” ’263 Patent at 4:65-67.

127. In the system configuration of Figure 2b, for example, “remote program guide access device 24 is connected to television distribution facility 16 via communications device 27. In this approach television distribution facility 16 may distribute program guide data to remote program guide access device 24 directly. Television distribution facility 16 may also distribute additional data from user television equipment 22 that may be necessary for allowing remote program guide access device 24 to access various functions of the interactive program guide (e.g., reminder information, parental control settings, favorite channel settings, user profiles, etc.).” ’263 Patent at 5:47-57. Alternatively, as shown in, for example, Figure 2d, the IPG equipment 17 and remote program guide access device 24 may employ “client-server based interactive program guide systems” wherein the “program guide distribution equipment 21 may include program guide server 25.” ’263 Patent at 5:64-6:2. “[R]emote program guide access device 24 may, for example, communicate with program guide server 25 over remote access link 19 via communications device 27 as shown in FIG. 2d.” ’263 Patent at 6:26-29. “In practice,

remote program guide access device 24 may be connected to user television equipment 22 (as shown in FIGS. 2*a* and 2*c*), television distribution facility 16 (as shown in FIG. 2*b*), connected to both (as indicated in FIG. 1), or may communicate with remote program guide server 25 (as shown in FIG. 2*d*) via remote access link 19.” ’263 Patent at 6:50-56.

128. “FIG. 5 is a schematic block diagram of an illustrative remote program guide access device in accordance with the principles of the present invention.” ’263 Patent at 3:57-59.

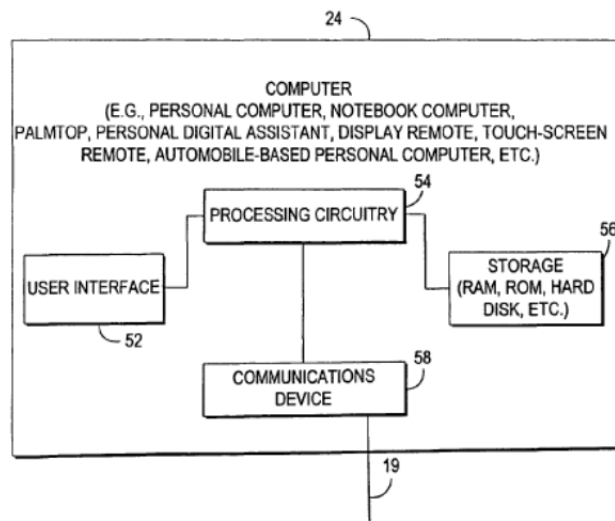


FIG. 5

The remote device may be a “personal computer (PC), portable computer (e.g., a notebook computer), palmtop computer, handheld personal computer (H/PC), display remote, touch-screen remote, automobile PC, personal digital assistant (PDA), or other suitable computer based device.” ’263 Patent at 9:43-49. The device “may have user interface 52, processing circuitry 54, storage 56, and communications device 58.” ’263 Patent at 9:49-51.

129. The communications device 58 supports “communications between remote program access device 24 and interactive television program guide equipment 17 over link 19,” and may comprise a communications port, modem, network interface card, or wireless transceiver. ’263 Patent at 9:64-10:7. For communications between the remote program guide access device 24 and IPG equipment 17 over link 19, the system may employ, for example, a

“protocol stack which includes Sequenced Packet Exchange/Internetwork Packet Exchange (SPX/IPX) layers, Transmission Control Protocol/Internet Protocol (TCP/IP) layers,” or other suitable protocols. ’263 Patent at 10:29-40.

130. “Remote program guide access device 24 may establish an Internet session with Internet service system 61 and thereby obtain program guide data from or set program guide settings with (e.g., set reminders or notifications, view listings, schedule program recording, . . . etc.) the program guide running on interactive program guide equipment 17.” ’263 Patent at 10:66-11:12. The ’263 Patent explains that, for example, “Internet service system 61 . . . may interact with user television equipment 22 directly or via program guide distribution equipment 21 when supporting communications between the program guide and the remote program guide access device. If the program guide implemented on interactive television program guide equipment 17 is a client-server guide as shown in FIG. 6b, Internet service system 61 may interact with program guide server 25 when supporting communications between the program guide and the remote program guide access device 24.” ’263 Patent at 11:20-31.

131. The ’263 Patent provides an example scenario for a user employing this system: “the user at work may interact with the program guide on user television equipment 22 via Internet service system 61 to select programs for recording on the user’s home videocassette recorder, or to schedule program reminders that will appear on the user’s home television or remote program guide access device just before a program is broadcast.” ’263 Patent at 11:54-60.

132. “Program guide information (e.g., reminder information, listings information, recording information, . . . [etc.]) may be exchanged, and settings set, between the two interactive television program guides over remote access link 19 using one or more access



communications.” ’263 Patent at 12:47-55. Where an Internet link is used, “program guide functionality may be accessed by, for example, using the Hypertext Transfer Protocol (HTTP). Remote program guide access device 24 and interactive television program guide equipment 17 may, for example, transfer program guide information as files using the File Transfer Protocol (FTP) or Trivial File Transfer Protocol (TFTP), running over a TCP/IP protocol stack.” ’263 Patent at 13:11-19.

133. The remote program access guide device 24 may “access stored program guide information or obtain program guide information from interactive television program guide equipment 17 via remote access link 19 . . . and generate an appropriate display screen for display using user interface 52.” ’263 Patent at 14:6-11. This can include “information on the user’s preferences” obtained “from the local interactive television program guide,” which information can be “used by the local and remote access interactive program guides to navigate through favorite channels and display television program listings.” ’263 Patent at 17:4-9, 19-22. These “[u]ser preference profiles may also be used to limit the amount of data provided to remote program guide access device 24 and thereby tend to minimize the bandwidth requirements of remote access link 19.” ’263 Patent at 17:37-40.

134. In view of the historical context and development of using a remote IPG implemented on a remote access device to instruct a local IPG to record a television program, discussed below, a person of ordinary skill in the art would have understood that the ’263 Patent’s inventions provide unconventional solutions to solve the problems that they address.

## **II. HISTORICAL CONTEXT OF THE ’263 PATENT**

135. The use of a method and system “to provide an interactive television program guide system in which the program guide may be remotely accessed by the user [that] may allow the user to access important features of the user’s in-home program guide from a remote location

and set program guide settings for those features” was not common or conventional at the time of the ’263 Patent’s inventions, let alone for years thereafter. ’263 Patent at 2:23-28.

136. At the time of the inventions of the ’263 Patent, the largest and most sophisticated Pay-TV providers did not offer anything resembling the claimed functionality. It was not until many years after the inventions of the ’263 Patent that providers began offering the ability to communicate programs to be recorded to a local program guide from a remote access device, and today, that ability has been widely adopted by Pay-TV service providers.

137. Indeed, according to AT&T, by November 2006, AT&T’s U-verse service “was one of the first providers to introduce Web Remote Access to the DVR.”<sup>27</sup> A 2007 AT&T press release describes this feature as “Web remote access to digital video recorder (DVR), which allows high speed Internet customers to schedule recordings using their AT&T Yahoo!® account. This feature is unique to AT&T among local providers.”<sup>28</sup>

138. AT&T first introduced a Mobile Remote Access feature similar to its Web Remote Access feature in April 2007, nearly nine years after the inventions of the ’263 Patent.<sup>29</sup>

139. More than 10 years after the inventions of the ’263 Patent, in 2009, AT&T lauded as “DVR enhancements” expanded functionality permitting users to “easily search U-verse TV program listings from the full program guide, view descriptions of selected programs, schedule

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<sup>27</sup> AT&T, *New iPhone and iPod Touch Application from AT&T Lets Customers Schedule U-verse TV DVR Recordings on the Go* (June 25, 2009), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26877> (last visited Mar. 28, 2016).

<sup>28</sup> AT&T, *AT&T Introduces U-verse in Dallas-Fort Worth* (Mar. 6, 2007), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=23483> (last visited Mar. 28, 2016).

<sup>29</sup> AT&T, “AT&T U-verse Timeline” (2008), available at <https://www.att.com/Common/merger/files/pdf/U-verse%20Timeline41907.pdf> (last visited Mar. 28, 2016).

program or series recordings, manage or edit scheduled recordings, and delete stored DVR content.”<sup>30</sup>

140. Similarly, Verizon did not offer remote program guide access until at least 2009. A November 2008 press release explained how “Verizon is also planning to launch several other new IMG [(Interactive Media Guide)] features in the future, including . . . Remote DVR Programming.”<sup>31</sup> This feature was introduced in January 2009, and allowed customers “to remotely control their Home Media DVRs either online or via select Verizon Wireless handsets.”<sup>32</sup>

141. In an August 2009 press release, Verizon touted the introduction of an “advanced” feature, available to all FiOS TV DVR users who also subscribe to FiOS Internet, that “lets DVR subscribers use any Internet-enabled cell phone to remotely manage their recorders, including reviewing, changing or adding recording requests; deleting recorded programs; browsing and searching TV and video-on-demand listings; setting parental controls; and more.”<sup>33</sup>

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<sup>30</sup> AT&T, *New iPhone and iPod Touch Application from AT&T Lets Customers Schedule Universe TV DVR Recordings on the Go* (June 25, 2009), <http://www.att.com/gen/press-room?pid=4800&cdvn=news&newsarticleid=26877> (last visited Mar. 28, 2016).

<sup>31</sup> Verizon, *Verizon Launches New Wave of Interactive Features for FiOs TV Customers in the Tampa Bay Area* (Nov. 12, 2008), <http://www.verizon.com/about/news/press-releases/verizon-launches-new-wave-interactive-features-fios-tv-customers-tampa-bay-area> (last visited Mar. 28, 2016).

<sup>32</sup> Verizon, *Verizon FiOs TV Customers Don’t Miss a Thing With Remote DVR Programming* (Jan. 8, 2009), <http://www.verizon.com/about/news/press-releases/verizon-fios-tv-customers-dont-miss-thing-remote-dvr-programming> (last visited Mar. 28, 2016).

<sup>33</sup> Verizon, *Advanced Multimedia and Remote DVR Features Now Available to FiOs TV DVR Customers* (Aug. 11, 2009), <http://www.verizon.com/about/news/press-releases/advanced-multimedia-and-remote-dvr-features-now-available-fios-tv-dvr-customers> (last visited Mar. 28, 2016).

142. Thus, accessing a user's in-home television equipment remotely to schedule recordings and to use other interactive program guide features was not available to consumers in the industry until years after the time of invention of the '263 Patent.

143. Moreover, the '263 Patent describes a remote access device that can interact with the user's local program guide equipment in order to schedule recordings through the local program guide. Remote interaction with the local program guide permits users to set in-home program reminders, adjust parental control settings, and select programs for recording. These features were absent from then-available alternatives to the in-home IPG, such as program guides available through online programs and personal computers. '263 Patent at 1:40-45, 1:49-53, 2:10-18, 2:19-22.

144. Neither did the largest and most sophisticated Pay-TV providers offer anything resembling this functionality through a mobile device at the time of the inventions of the '263 Patent. It was not until many years after the time of inventions of the '263 Patent that providers began offering users the ability to use a mobile device (and corresponding mobile application) to remotely communicate programs to be recorded by local program guide equipment.

145. DirecTV did not release a mobile application allowing remote recording until March 2009.<sup>34</sup> DirecTV touted this ability "to easily set your home DVR from any cell phone or computer" in a national television advertisement beginning in January 2009, over a decade after the inventions of the '263 Patent.<sup>35</sup>

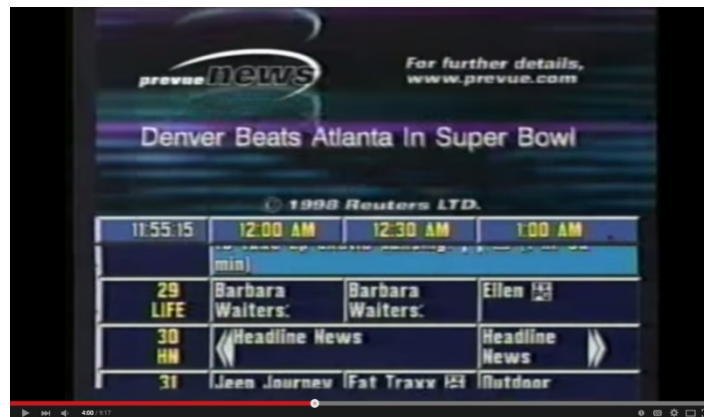
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<sup>34</sup> Mel Martin, *DirecTV beams down iPhone app*, ENGADGET (Mar. 30, 2009), <http://www.engadget.com/2009/03/30/directv-beams-down-iphone-app/> (last visited Mar. 28, 2016).

<sup>35</sup> Justin Berka, *DirecTV releases remote recording application for iPhone*, ARS TECHNICA (Mar. 31, 2009), <http://arstechnica.com/apple/2009/03/directv-releases-remote-recording-application-for-iphone/> (last visited Mar. 28, 2016); DirecTV – Hellboy – MethodStudios, ADFORUM,

146. Comcast did not offer the ability to schedule recordings using a mobile device until March 2010 with the release of Comcast Mobile 2.0.<sup>36</sup>

147. Furthermore, at the time of the inventions of the '263 Patent, IPGs were still in their infancy. The IPGs discussed by the '263 Patent were not yet widely adopted by Pay-TV providers. Instead, still prevalent at the time were non-interactive programming schedules that scrolled through programming for all channels, as shown below:



Prevue Channel format from 1993 to 1999<sup>37</sup>

148. IPGs, to the extent they even were available, did not communicate with other IPGs implemented elsewhere in order to schedule recordings using an IPG.

149. The '263 Patent discloses, among other things, the use of a mobile computing device, a technology also in its infancy. The iPhone was not released until 2007, nine years after the time of the inventions of the '263 Patent. Competing smartphones using the Android

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<http://www.adforum.com/production/6658175/creative-work/34442420/hellboy/directv> (last visited Mar. 28, 2016).

<sup>36</sup> Comcast, *Comcast Mobile App Part 2.0 – Xfinity Voice, Video and Email Go Mobile* (Mar. 1, 2010), <http://corporate.comcast.com/comcast-voices/comcast-mobile-app-part-20-xfinity-voice-video-and-email-go-mobile> (last visited Mar. 28, 2016).

<sup>37</sup> *Prevue Becomes TV Guide Channel – Feb. 1, 1999*, YOUTUBE, <https://www.youtube.com/watch?v=rLApAmSQ5U> (last visited Mar. 28, 2016).

operating system were not released until 2008. Even the earliest Blackberry smartphones did not exist at the time of the inventions of the '263 Patent.

150. Mobile devices at the time of the inventions of the '263 Patent were limited in terms of features and computing capacity. The Nokia 9000 Communicator, introduced in 1996, featured a monochromatic display and a full QWERTY keyboard, and had only 8 MB of RAM.<sup>38</sup> As explained above, mobile phone applications with IPG functionality were still years away.

151. The '263 Patent claims cannot be performed in the human mind or using pen and paper. As noted above, the '263 Patent expressly states that it is drawn to address a specific, technical problem arising in the context of IPGs, which were generally implemented on in-home receivers that could not readily communicate with IPGs on remote devices (including mobile devices), and thus “require[d] that the user be physically present in the home to access important program guide features such as program reminders, parental control, and program recording.” '263 Patent at 2:19-22. As described above, the patent specifically discloses embodiments using specific technologies for generating and displaying program listings, communications technology and protocols, and user computer equipment and portable electronic devices.

152. This technical context is reflected in the '263 Patent's claims. For example, each of the claims requires local interactive television program guide equipment, on which a local interactive television program guide is implemented, and a remote interactive television program guide access device, which communicate over an Internet communications path. As another example, the '263 Patent's claims require that the program listings displayed on the remote

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<sup>38</sup> Taylor Martin, *The evolution of the smartphone*, POCKETNOW (July 28, 2014), <http://pocketnow.com/2014/07/28/the-evolution-of-the-smartphone> (last visited Mar. 28, 2016).

access device be based upon a remotely stored user profile, thereby addressing technical limitations of mobile devices – then and today – such as memory capacity constraints, as well as providing a technological solution to the problem of providing a seamless user-experience across a variety of mobile devices with differing memory and computing constraints.

153. A person having ordinary skill in the art at the time of the inventions of the '263 Patent would not have understood that the inventions could or would be performed solely in the human mind or using pen and paper. Using pen and paper would ignore the stated purpose of the '263 Patent and the problem it was specifically designed to address. Doing so would also run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility.

### **III. '263 PATENT ALLEGATIONS**

154. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '263 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused DVR Products (hereafter “the '263 Accused Products”) and associated software (including at least the Xfinity branded mobile IPG) that are used to infringe at least Claim 14 of the '263 Patent. On information and belief after reasonable investigation, each of the '263 Accused Products is designed to be and is used with Comcast's Xfinity TV Remote App to enable a user to “Schedule a DVR recording with the XFINITY TV Remote App.”<sup>39</sup>

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<sup>39</sup> Xfinity Apps: Schedule a DVR recording with the XFINITY TV Remote App, <http://customer.xfinity.com/help-and-support/xfinity-apps/schedule-dvr-recordings-in-xfinity-apps/> (last visited Mar. 22, 2016).

155. Defendants have been, and currently are, active inducers of infringement of the '263 Patent under 35 U.S.C. § 271(b) and contributory infringers of the '263 Patent under 35 U.S.C. § 271(c).

156. Defendants knew of the '263 Patent, or should have known of the '263 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the '263 Patent since at least as early as the filing and/or service of the original Complaint in this action. Further, prior to the filing this Complaint, Rovi provided presentations and claim charts to Comcast specifically identifying patents in Rovi's portfolio, including the '263 Patent, and showing an example of Comcast's infringement of the '263 Patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc., on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents, including the '263 Patent. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to Rovi's guidance portfolio, including the '263 Patent. Defendants have provided the '263 Accused Products to their customers and/or instructions to use the '263 Accused Products in an infringing manner while being on notice of or willfully blind to the '263 Patent and Defendants' infringement. Therefore, on information and belief, Defendants knew or should have known of the '263 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

157. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '263 Patent.



Comcast's Xfinity TV Partner Program was officially launched after the filing of the original Complaint in this case, and after Comcast was put on notice of the '263 Patent. Comcast has knowledge of the '263 Patent and actively encourages third parties to implement the X1 infringing services in their service offerings, with knowledge that such services will directly infringe the '263 Patent.

158. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries to make, use, sell/lease, and/or offer for sale/lease the '263 Accused Products. The subsidiaries directly infringe at least claim 14 of the '263 Patent at least by making, using, selling/leasing, and/or offering for sale/lease the '263 Accused Products. Comcast induces such infringement by providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '263 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 14 of the '263 Patent, or subjectively believes that its actions will result in infringement of the '263 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

159. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make, use, sell/lease, offer for sale/lease, and/or import the '263 Accused Products. The Manufacturer Defendants directly infringe at least claim 14 of the '263 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '263 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of,

the '263 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 14 of the '263 Patent, or subjectively believed that its actions will result in infringement of the '263 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

160. Comcast also provides the '263 Accused Products and instructions to end-user customers so that such customers will use the '263 Accused Products in an infringing manner. For example, Comcast markets the Xfinity TV Remote App to end-user customers by touting the ability to "Schedule a DVR recording with the XFINITY TV Remote App" as "a great way to make sure you don't miss your favorite shows." Comcast provides instructions to end-user customers on "How to do it," e.g., "From the Main Screen: Select The Guide. Review the grid of available programs. Select the program you want to record. You'll see an option to record the program on your DVR."<sup>40</sup> Comcast end-user customers directly infringe at least claim 14 of the '263 Patent by using the '263 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the '263 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '263 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 14 of the '263 Patent, or subjectively believes that its actions will result in infringement of the '263 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

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<sup>40</sup> Xfinity, *Xfinity Apps: Schedule a DVR recording with the XFINITY TV Remote App*, <http://customer.xfinity.com/help-and-support/xfinity-apps/schedule-dvr-recordings-in-xfinity-apps/> (last visited Mar. 28, 2016).

161. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries and (2) end-user customers, to directly infringe the '263 Patent.

162. For example, the Manufacturer Defendants provide the '263 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast and/or its subsidiaries directly infringe claims of the '263 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '263 Accused Products. The Manufacturer Defendants induce such infringement by providing the '263 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '263 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '263 Patent, or subjectively believe that their actions will result in infringement of the '263 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

163. The Manufacturer Defendants also induce end-user customers to infringe by providing the '263 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '263 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '263 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '263 Patent, or subjectively believe that their actions will result in infringement of the '263 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

164. Defendants contributorily infringe at least claim 14 of the '263 Patent by providing the '263 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '263 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '263 Accused Products are specially designed to infringe at least claim 14 of the '263 Patent, and their accused components have no substantial non-infringing uses.

165. This Complaint will serve as further notice to Defendants of the '263 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

166. Additional allegations regarding Defendants' knowledge of the '263 Patent and willful infringement—including, for example, through Comcast's Xfinity TV Partner Program that it launched after the filing of the original Complaint in this case—will likely have evidentiary support after a reasonable opportunity for discovery.

167. Defendants' infringement of the '263 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

168. Defendants' infringement of the '263 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

169. Rovi has been damaged by Defendants' infringement of the '263 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

170. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '263 Patent, including without limitation lost profits and not less than a reasonable royalty.

## **SECOND CLAIM FOR RELIEF**

### **INFRINGEMENT OF U.S. PATENT NO. 8,578,413**

171. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-170 of this Complaint.

172. The '413 Patent is valid and enforceable under United States Patent Laws.

173. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '413 Patent.

174. A copy of the '413 Patent is attached as Exhibit B

175. The original provisional applications that led to the issuance of the '413 Patent were filed on August 21, 1998 and July 17, 1998.

176. On October 5, 2015, a notice of allowance was mailed in the prosecution of U.S. Application No. 13/195,678 (now U.S. Patent No. 9,204,184), which claims the benefit of the same priority applications as the '413 Patent.

#### **I. THE '413 PATENT**

177. The '413 Patent shares a substantially common specification with the '263 Patent, described above, and, therefore, the allegations of paragraphs 124 through 134 above are specifically incorporated by reference with respect to the '413 Patent.

#### **II. HISTORICAL CONTEXT OF THE '413 PATENT**

178. The '413 Patent claims priority from the same provisional applications as the '263 Patent, and, therefore, the allegations of paragraphs 135 through 153 above are specifically incorporated by reference with respect to the '413 Patent.

### III. '413 PATENT ALLEGATIONS

179. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '413 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused DVR Products (hereafter “the '413 Accused Products”) and associated software (including at least the Xfinity branded mobile IPG) that are used to infringe at least Claim 1 of the '413 Patent. On information and belief after reasonable investigation, each of the '413 Accused Products is designed to be and is used with Comcast’s Xfinity TV Remote App to enable a user to “Schedule a DVR recording with the XFINITY TV Remote App.”<sup>41</sup>

180. Defendants have been, and currently are, active inducers of infringement of the '413 Patent under 35 U.S.C. § 271(b) and contributory infringers of the '413 Patent under 35 U.S.C. § 271(c).

181. Defendants knew of the '413 Patent, or should have known of the '413 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the '413 Patent since at least as early as the filing and/or service of the original Complaint in this action. Further, prior to the filing this Complaint, Rovi provided presentations and claim charts to Comcast specifically identifying patents in Rovi’s portfolio, including the '413 Patent, and showing an example of Comcast’s infringement of the '413 Patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc.,

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<sup>41</sup> Xfinity Apps: Schedule a DVR recording with the XFINITY TV Remote App, <http://customer.xfinity.com/help-and-support/xfinity-apps/schedule-dvr-recordings-in-xfinity-apps/> (last visited Mar. 22, 2016).

on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents, including the '413 Patent. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to Rovi's guidance portfolio, including the '413 Patent. Defendants have provided the '413 Accused Products to their customers and/or instructions to use the '413 Accused Products in an infringing manner while being on notice of or willfully blind to the '413 Patent and Defendants' infringement. Therefore, on information and belief, Defendants knew or should have known of the '413 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

182. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '413 Patent. Comcast's Xfinity TV Partner Program was officially launched after the filing of the original Complaint in this case, and after Comcast was put on notice of the '413 Patent. Comcast has knowledge of the '413 Patent and actively encourages third parties to implement the X1 infringing services in their service offerings, with knowledge that such services will directly infringe the '413 Patent.

183. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries to make, use, sell/lease, and/or offer for sale/lease the '413 Accused Products. The subsidiaries directly infringe at least claim 1 of the '413 Patent at least by making, using, selling/leasing, and/or offering for sale/lease the '413 Accused Products. Comcast induces such infringement by

providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '413 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 1 of the '413 Patent, or subjectively believes that its actions will result in infringement of the '413 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

184. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make, use, sell/lease, offer for sale/lease, and/or import the '413 Accused Products. The Manufacturer Defendants directly infringe at least claim 1 of the '413 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '413 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '413 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 1 of the '413 Patent, or subjectively believed that its actions will result in infringement of the '413 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

185. Comcast also provides the '413 Accused Products and instructions to end-user customers so that such customers will use the '413 Accused Products in an infringing manner. For example, Comcast markets the XFINITY TV Remote App to end-user customers by touting the ability to “Schedule a DVR recording with the XFINITY TV Remote App” as “a great way to make sure you don’t miss your favorite shows.” Comcast provides instructions to end-user customers on “How to do it,” e.g., “From the Main Screen: Select The Guide. Review the grid of



available programs. Select the program you want to record. You'll see an option to record the program on your DVR.”<sup>42</sup> Comcast end-user customers directly infringe at least claim 1 of the ’413 Patent by using the ’413 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the ’413 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the ’413 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 1 of the ’413 Patent, or subjectively believes that its actions will result in infringement of the ’413 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

186. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries and (2) end-user customers, to directly infringe the ’413 Patent.

187. For example, the Manufacturer Defendants provide the ’413 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast and/or its subsidiaries directly infringe claims of the ’413 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the ’413 Accused Products. The Manufacturer Defendants induce such infringement by providing the ’413 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the ’413 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the ’413 Patent, or subjectively believe

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<sup>42</sup> Xfinity, *Xfinity Apps: Schedule a DVR recording with the XFINITY TV Remote App*, <http://customer.xfinity.com/help-and-support/xfinity-apps/schedule-dvr-recordings-in-xfinity-apps/> (last visited Mar. 28, 2016).

that their actions will result in infringement of the '413 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

188. The Manufacturer Defendants also induce end-user customers to infringe by providing the '413 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '413 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '413 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '413 Patent, or subjectively believe that their actions will result in infringement of the '413 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

189. Defendants contributorily infringe at least claim 1 of the '413 Patent by providing the '413 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '413 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '413 Accused Products are specially designed to infringe at least claim 1 of the '413 Patent, and their accused components have no substantial non-infringing uses.

190. This Complaint will serve as further notice to Defendants of the '413 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

191. Additional allegations regarding Defendants' knowledge of the '413 Patent and willful infringement will likely have evidentiary support after a reasonable opportunity for discovery.

192. Defendants' infringement of the '413 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

193. Defendants' infringement of the '413 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

194. Rovi has been damaged by Defendants' infringement of the '413 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

195. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '413 Patent, including without limitation lost profits and not less than a reasonable royalty.

### **THIRD CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 8,046,801**

196. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-195 of this Complaint.

197. The '801 Patent is valid and enforceable under United States Patent Laws.

198. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '801 Patent.

199. A copy of the '801 Patent is attached as Exhibit C.

200. The original provisional applications that led to the issuance of the '801 Patent were filed on August 21, 1998 and July 17, 1998.

201. On October 5, 2015, a notice of allowance was mailed in the prosecution of U.S. Application No. 13/195,678 (now U.S. Patent No. 9,204,184), which claims the benefit of the same priority applications as the '801 Patent.

### **I. THE '801 PATENT**

202. The '801 Patent shares a substantially common specification with the '263 Patent described above and, therefore, the allegations of paragraphs 124 through 134 above are specifically incorporated by reference with respect to the '801 Patent.

203. In addition, the '801 Patent discloses and claims, among other things, that at least some of the remote device's "display is generated by the remote guide based on program guide information received from a local guide implemented on user equipment via the Internet." '801 Patent at 40:10-13.

### **II. HISTORICAL CONTEXT OF THE '801 PATENT**

204. The '801 Patent claims priority from the same provisional applications as the '263 Patent, and, therefore, the allegations of paragraphs 135 through 153 above are specifically incorporated by reference with respect to the '801 Patent.

205. In addition, a person of ordinary skill at the time of the inventions of the '801 Patent would have recognized that the '801 Patent's claims provide a technological solution to limitations of data storage and processing power with respect to a remote device on which an IPG could be implemented by reducing the amount of data that must be stored locally on the remote device in order to generate an IPG on the remote device. *See* '801 Patent at 20:21-31.

### **III. '801 PATENT ALLEGATIONS**

206. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '801 Patent in violation of 35 U.S.C. § 271 et seq., directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the

United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused DVR Products (hereafter “the ’801 Accused Products”) and associated software (including at least the Xfinity branded mobile IPG) that are used to infringe at least claim 51 of the ’801 Patent. On information and belief after reasonable investigation, each of the ’801 Accused Products is designed to be and is used with Comcast’s Xfinity TV Remote App to enable a user to “Schedule a DVR recording with the XFINITY TV Remote App.”<sup>43</sup>

207. Defendants have been, and currently are, active inducers of infringement of the ’801 Patent under 35 U.S.C. § 271(b) and contributory infringers of the ’801 Patent under 35 U.S.C. § 271(c).

208. Defendants knew of the ’801 Patent, or should have known of the ’801 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the ’801 Patent since at least as early as the filing and/or service of the original Complaint in this action. Further, prior to the filing this Complaint, Rovi provided presentations and claim charts to Comcast specifically identifying patents in Rovi’s portfolio, including the ’801 Patent, and showing an example of Comcast’s infringement of the ’801 Patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc., on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents, including the ’801 Patent. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to

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<sup>43</sup> Xfinity Apps: Schedule a DVR recording with the XFINITY TV Remote App, <http://customer.xfinity.com/help-and-support/xfinity-apps/schedule-dvr-recordings-in-xfinity-apps/> (last visited Mar. 22, 2016).

Rovi's guidance portfolio, including the '801 Patent. Defendants have provided the '801 Accused Products to their customers and/or instructions to use the '801 Accused Products in an infringing manner while being on notice of or willfully blind to the '801 Patent and Defendants' infringement. Therefore, on information and belief, Defendants knew or should have known of the '801 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

209. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '801 Patent. Comcast's Xfinity TV Partner Program was officially launched after the filing of the original Complaint in this case, and after Comcast was put on notice of the '801 Patent. Comcast has knowledge of the '801 Patent and actively encourages third parties to implement the X1 infringing services in their service offerings, with knowledge that such services will directly infringe the '801 Patent.

210. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries of Comcast to make, use, sell/lease, and/or offer for sale/lease the '801 Accused Products. The subsidiaries directly infringe at least claim 51 of the '801 Patent at least by making, using, selling/leasing, and/or offering for sale/lease the '801 Accused Products. Comcast induces such infringement by providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '801 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 51 of the '801 Patent, or subjectively believes that its actions will

result in infringement of the '801 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

211. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make, use, sell/lease, offer for sale/lease, and/or import the '801 Accused Products. The Manufacturer Defendants directly infringe at least claim 51 of the '801 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '801 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '801 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 51 of the '801 Patent, or subjectively believed that its actions will result in infringement of the '801 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

212. Comcast also provides the '801 Accused Products and instructions to end-user customers so that such customers will use the '801 Accused Products in an infringing manner. For example, Comcast markets the XFINITY TV Remote App to end-user customers by touting the ability to "Schedule a DVR recording with the XFINITY TV Remote App" as "a great way to make sure you don't miss your favorite shows." Comcast provides instructions to end-user customers on "How to do it," e.g., "From the Main Screen: Select The Guide. Review the grid of available programs. Select the program you want to record. You'll see an option to record the program on your DVR."<sup>44</sup> Comcast end-user customers directly infringe at least claim 51 of

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<sup>44</sup> Xfinity, *Xfinity Apps: Schedule a DVR recording with the XFINITY TV Remote App*, <http://customer.xfinity.com/help-and-support/xfinity-apps/schedule-dvr-recordings-in-xfinity-apps/> (last visited Mar. 28, 2016).

the '801 Patent by using the '801 Accused Products in their intended manner to infringe.

Comcast induces such infringement by providing the '801 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '801 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 51 of the '801 Patent, or subjectively believes that its actions will result in infringement of the '801 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

213. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries and (2) end-user customers, to directly infringe the '801 Patent.

214. For example, the Manufacturer Defendants provide the '801 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast and/or its subsidiaries directly infringe claims of the '801 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '801 Accused Products. The Manufacturer Defendants induce such infringement by providing the '801 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '801 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '801 Patent, or subjectively believe that their actions will result in infringement of the '801 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

215. The Manufacturer Defendants also induce end-user customers to infringe by providing the '801 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly



infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '801 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '801 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '801 Patent, or subjectively believe that their actions will result in infringement of the '801 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

216. Defendants contributorily infringe at least claim 51 of the '801 Patent by providing the '801 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '801 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '801 Accused Products are specially designed to infringe at least claim 51 of the '801 Patent, and their accused components have no substantial non-infringing uses.

217. This Complaint will serve as further notice to Defendants of the '801 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

218. Additional allegations regarding Defendants' knowledge of the '801 Patent and willful infringement—including, for example, through Comcast's Xfinity TV Partner Program that it launched after the filing of the original Complaint in this case—will likely have evidentiary support after a reasonable opportunity for discovery.

219. Defendants' infringement of the '801 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

220. Defendants' infringement of the '801 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

221. Rovi has been damaged by Defendants' infringement of the '801 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

222. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '801 Patent, including without limitation lost profits and not less than a reasonable royalty.

#### **FOURTH CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 8,621,512**

223. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-222 of this Complaint.

224. The '512 Patent is valid and enforceable under United States Patent Laws.

225. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '512 Patent.

226. A copy of the '512 Patent is attached as Exhibit D.

227. The original provisional application that led to the issuance of the '512 Patent was filed on June 16, 1998.

#### **I. THE '512 PATENT**

228. The '512 Patent discloses, among other things, "[a]n interactive television program guide system . . . in which a user may use the program guide to watch one program while simultaneously recording another program without interrupting the recording or viewing

process.” ’512 Patent at Abstract. This IPG can be implemented on a receiver with multiple tuners. ’512 Patent at 1:42-47. If the user “select[s] a television program to be recorded” but “all of the tuners are in use, . . . the interactive television program guide may allocate a tuner for the recording function if the user indicates he is no longer interested in using the [picture-in-picture feature] or another secondary tuner function.” ’512 Patent at 1:57-58, 2:1-9.

229. The ’512 Patent notes that “[i]nteractive program guides are typically implemented on set-top boxes. The program guides implemented on set-top boxes allow users to view television program listings. In addition, some program guides allow the user to select a program to be recorded.” ’512 Patent at 1:26-30.

230. The ’512 Patent identifies a problem with then-existing IPG systems: “A significant disadvantage to the program guides that are currently available is that they are generally based on set-top boxes that contain one tuner (although set-top boxes containing two tuners have been proposed). A program may be selected for recording using such one-tuner program guides, however, a viewer is unable to watch one program while simultaneously recording another.” Thus, “[w]hat is needed is a more sophisticated program guide that can perform an allocation function amongst multiple tuners.” *Id.* at 1:35-43. The ’512 Patent describes such a system.

231. The ’512 Patent discloses that “[t]o record a program, set-top box 112 tunes to a particular channel and sends control signals via infrared (IR) transmitter 200, other suitable control paths such as a hard-wired link or serial bus 201 to VCR 114. The control signals direct VCR 114 to start and stop recording at the appropriate times.” *Id.* at 5:14-19.

232. The ’512 Patent discloses exemplary features of the claimed system: “Typically a digital tuner for the interactive television program guide system may contain an analog tuner, a

decoder such as a Motion Pictures Experts Group ('MPEG') MPEG-2 decoder, a demodulator such as a quadrature amplitude modulation ('QAM') demodulator, and a demultiplexer such as a MPEG-2 demultiplexer that is used to extract the portion of the television input signal that is desirable to the user and corresponds to a particular television program or channel." Id. at 5:50-58. In addition, the '512 Patent discloses that "[a]lternatives for the recording device include a videocassette recorder, a digital versatile disk or digital video disk ('DVD') player with recording capabilities, a digital storage device such as a disk drive or other suitable digital storage device that may or may not be part of the computer, or any other suitable recording device." Id. at 5:58-64.

233. Figure 2(b) of the '512 Patent depicts an illustrative two-tuner set top box:

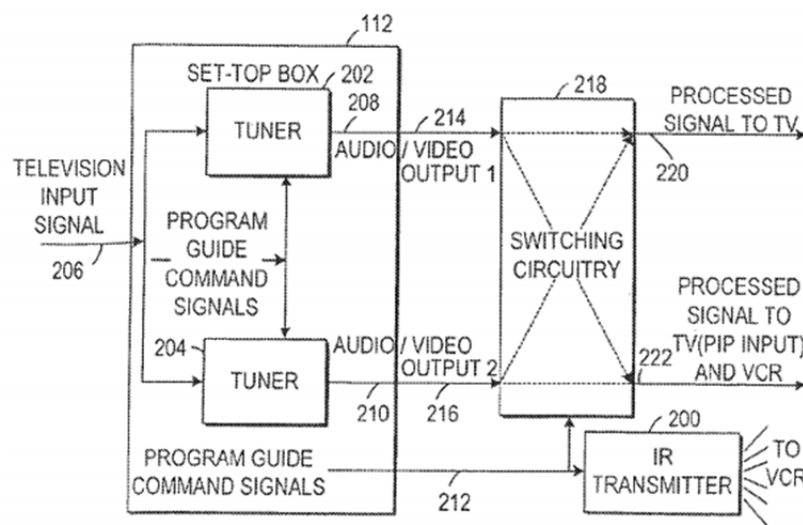
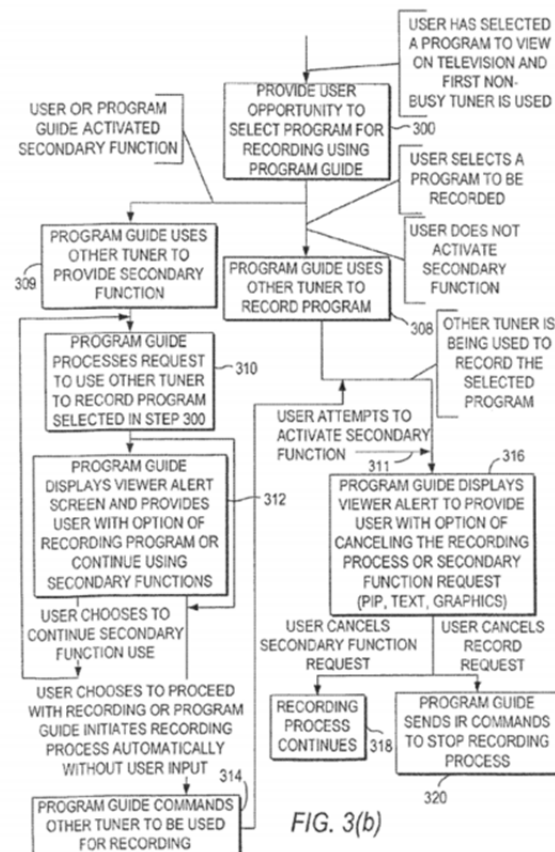


FIG. 2(b)

234. "The television input signal 206" into illustrative two-tuner set-top box 112 "may be received from a cable connected to a cable system headend or from an antenna that receives satellite television transmissions" or even "received over the Internet." '512 Patent 6:3-12.

235. “The arrangement of FIG. 2(b) allows the interactive television program guide to allocate whichever tuner is not currently busy for recording a selected program when that program is about to begin.” ’512 Patent at 7:55-58.

236. “FIG. 3(b) shows a flow chart of steps involved in using an interactive television program guide system having a set-top box configured as shown in FIG. 2(b).” ’512 Patent at 8:17-19.



237. The '512 Patent describes that “[b]efore step 300, a user may use the interactive television program guide to select a particular television program for viewing. The interactive television program guide commands a first non-busy tuner to direct its output to television 116 for user viewing. At step 300, the interactive television program guide provides the user with an opportunity to select a program to be recorded.” ’512 Patent at 8:19-25.

238. Prior to the selected program being recorded, the user may decide to activate a secondary function, such that “following step 309, both tuners are in use. The user is watching television with the first tuner while the second (other) tuner is being used to provide a secondary function.” ’512 Patent at 8:66-9:6.

239. The ’512 Patent also describes that

[a]t step 312, after the record request is processed the interactive television program guide displays viewer option for secondary function use (PIP cancellation) display screen 410 as shown in FIG. 4(b) which provides the user with an opportunity to either initiate the recording process or to continue using secondary functions that involve supplying PIP or additional text or graphics that overlay the display of television 116. The user, who is already watching television using the first non-busy tuner, may indicate a desire to continue using the other tuner for secondary functions by selecting “No” on the viewer option for secondary function use (PIP cancellation) display screen 410 with highlight region 411. This selection can be made by using remote control 118. If the user selects “No,” the interactive television program guide will continue to direct the other tuner to be used for secondary function use.

’512 Patent at 9:9-24.

240. According to the ’512 Patent, “[t]hus, following step 308, both tuners are in use. The user is watching television with the first tuner while the second (other) tuner is being used to record the selected program. If the user attempts to activate a secondary function as shown at point 311 in FIG. 3(b), the interactive television program guide displays viewer option for secondary function use (recording cancellation) display screen 420 at step 316 as shown in FIG. 4(c) which gives the user the option to either cancel the recording process and allocate the other tuner for secondary function use or to continue the recording process and cancel the secondary function request.” ’512 Patent at 9:48-59.

241. In view of the historical context and development of IPGs that display user alerts to resolve conflicts involving multiple tuners, discussed below, a person of ordinary skill in the

art would have understood that the '512 Patent's inventions provide an unconventional solution to solve the problems that they address..

## II. HISTORICAL CONTEXT OF THE '512 PATENT

242. The use of a first tuner and a second tuner to “provide[] the user of an interactive television program guide with the ability to watch one program while simultaneously recording another,” let alone the use of such first and second tuners in an IPG system that provides a user with increased flexibility and control over the function of the tuners, was not common or conventional at the time of the '512 Patent's invention. '512 Patent at 1:55-57.

243. As the '512 Patent explains, program guides of that time were “generally based on set-top boxes that contain one tuner” and two-tuner set-top boxes merely “have been proposed.” Id. at 1:35-38.

244. It was several years before multi-tuner set-top boxes became commercially available, much less common or conventional. Upon information and belief, the first commercially available digital video recorder with dual tuner support for recording two programs at the same time was introduced in the United Kingdom in March 2001 by BSkyB, years after the inventions of the '512 Patent.<sup>45</sup>

245. In 1999, DirecTV and TiVo partnered to introduce combination DirecTV / TiVo receivers. The Philips DSR6000 “DirecTiVo” device contained two tuners, but could not record two programs at the same time until the Version 2.5 software update in summer 2001.<sup>46</sup>

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<sup>45</sup>*Digital Video Recorder*, WIKIPEDIA, [https://en.wikipedia.org/wiki/Digital\\_video\\_recorder#Introduction\\_of\\_dual\\_tuners](https://en.wikipedia.org/wiki/Digital_video_recorder#Introduction_of_dual_tuners) (last visited Mar. 28, 2016)

<sup>46</sup>*Philips DSR6000 for DirecTV*, TIVOPEDIA.COM, <http://www.tivopedia.com/model-philips-dsr6000.php> (last visited Mar. 28, 2016); *DirecTV and TiVo History*, TIVOPEDIA.COM, <http://www.tivopedia.com/directv-and-tivo-history.php> (last visited Mar. 28, 2016); Steve Kovsky, *Video IEDs: More Than Just Appliances*, PEARSON QUE (Nov. 1, 2002), <http://www.quepublishing.com/articles/article.aspx?p=29893> (last visited Mar. 28, 2016).

246. Even though dual-tuner set-top boxes and receivers were still being developed at the time of inventions of the '512 Patent, the patent is directed to resolving technical problems that arise in the context of operating those devices, and more specifically in the context of an IPG implemented used to control a dual-tuner device.

247. Given the state of the art at the time of the inventions and the much-later adoption of similar features in the market, the inventive concepts of the '512 Patent cannot be considered to be conventional. The '512 Patent discloses, among other things, an unconventional, inventive solution to resolving conflicts in IPGs implemented on dual-tuner set-top boxes to overcome unique programming challenges arising with interactive program guides.

248. The '512 Patent claims cannot be performed in the human mind or by using pen and paper. As noted above, the '512 Patent expressly states that it is drawn to address a specific, technical problem arising in the context of IPGs: "A significant disadvantage to the program guides that are currently available is that ... a viewer is unable to watch one program while simultaneously recording another," so "[w]hat is needed is a more sophisticated program guide that can perform an allocation function amongst multiple tuners." '512 Patent at 1:35-43.

249. A person having ordinary skill in the art at the time of the inventions of the '512 Patent would not have understood that the inventions could or would be performed solely in the human mind or using pen and paper. Using pen and paper would ignore the stated purpose of the '512 Patent and the problem it was specifically designed to address. Doing so would also run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility.

### **III. '512 PATENT ALLEGATIONS**

250. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '512 Patent in violation of 35 U.S.C. § 271 et



seq., directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused DVR Products and Accused Non-DVR Products (hereafter “the ’512 Accused Products”) that infringe at least claim 13 of the ’512 Patent. On information and belief after reasonable investigation, each of the ’512 Accused Products each of the ’512 Accused Products comprises or is designed to be used in: a system for resolving a conflict when multiple operations are performed using multiple tuners controlled by an interactive television program guide, the system comprising: a first tuner; a second tuner; and an interactive television program guide implemented on the system, wherein the interactive television program guide is operative to: receive a request to perform a tuning operation; determine that neither the first tuner nor the second tuner are available to perform the requested tuning operation, wherein the first tuner and the second tuner are both capable of performing the tuning operation; and in response to the determination, display an alert that provides a user with an opportunity to direct the interactive television program guide to cancel a function of the second tuner to permit the second tuner to perform the requested tuning operation.

251. Defendants have been, and currently are, active inducers of infringement of the ’512 Patent under 35 U.S.C. § 271(b) and contributory infringers of the ’512 Patent under 35 U.S.C. § 271(c).

252. Defendants knew of the ’512 Patent, or should have known of the ’512 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the ’512 Patent since at least as early as the filing and/or service of the original Complaint in this action. Further, prior to the filing this Complaint, Rovi provided presentations and claim charts to Comcast specifically identifying patents in Rovi’s portfolio, including

the '512 Patent, and showing an example of Comcast's infringement of the '512 Patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc., on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to Rovi's guidance portfolio, including the '512 Patent. Defendants have provided the '512 Accused Products to their customers and/or instructions to use the '512 Accused Products in an infringing manner while being on notice of or willfully blind to the '512 Patent and Defendants' infringement. Therefore, on information and belief, all Defendants knew or should have known of the '512 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

253. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '512 Patent. Comcast's Xfinity TV Partner Program was officially launched after the filing of the original Complaint in this case, and after Comcast was put on notice of the '512 Patent. Comcast has knowledge of the '512 Patent and actively encourages third parties to implement the X1 infringing services in their service offerings, with knowledge that such services will directly infringe the '512 Patent.

254. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries to make, use, sell/lease, and/or offer for sale/lease the '512 Accused Products. The subsidiaries directly infringe at least claim 13 of the '512 Patent at least by making, using, selling/leasing, and/or

offering for sale/lease the '512 Accused Products. Comcast induces such infringement by providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '512 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 13 of the '512 Patent, or subjectively believes that its actions will result in infringement of the '512 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

255. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make, use, sell/lease, offer for sale/lease, and/or import the '512 Accused Products. The Manufacturer Defendants directly infringe at least claim 13 of the '512 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '512 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '512 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 13 of the '512 Patent, or subjectively believed that its actions will result in infringement of the '512 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

256. Comcast also provides the '512 Accused Products and instructions to end-user customers so that such customers will use the '512 Accused Products in an infringing manner. For example, Comcast's marketing materials promote the use of the multiple tuners features of the '512 Accused Products, explaining that "X1 AnyRoom DVR has six tuners, meaning you can record up to six programs simultaneously." It also explains that one of its X1 AnyRoom DVRs,

“[t]he Pace XG1v1 has only five available tuners so you can record up to five shows at once or record four shows while watching another channel live.”<sup>47</sup> Comcast end-user customers directly infringe at least claim 13 claims of the ’512 Patent by using the ’512 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the ’512 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the ’512 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 13 of the ’512 Patent, or subjectively believes that its actions will result in infringement of the ’512 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

257. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries and (2) end-user customers, to directly infringe the ’512 Patent.

258. For example, the Manufacturer Defendants provide the ’512 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast and/or its subsidiaries directly infringe claims of the ’512 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the ’512 Accused Products. The Manufacturer Defendants induce such infringement by providing the ’512 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the ’512 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the ’512 Patent, or subjectively believe that their actions will result in infringement of the ’512 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

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<sup>47</sup> Xfinity, *Xfinity TV: X1 AnyRoom DVR: Overview*, <http://customer.xfinity.com/help-and-support/cable-tv/x1-anyroom-dvr-overview> (last visited Mar. 28, 2016).

259. The Manufacturer Defendants also induce end-user customers to infringe by providing the '512 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '512 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '512 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '512 Patent, or subjectively believe that their actions will result in infringement of the '512 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

260. Defendants contributorily infringe at least claim 13 of the '512 Patent by providing the '512 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '512 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '512 Accused Products are specially designed to infringe at least claim 13 of the '512 Patent, and their accused components have no substantial non-infringing uses.

261. This Complaint will serve as further notice to Defendants of the '512 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

262. Additional allegations regarding Defendants' knowledge of the '512 Patent and willful infringement—including, for example, through Comcast's Xfinity TV Partner Program that it launched after the filing of the original Complaint in this case—will likely have evidentiary support after a reasonable opportunity for discovery.

263. Defendants' infringement of the '512 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

264. Defendants' infringement of the '512 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

265. Rovi has been damaged by Defendants' infringement of the '512 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

266. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '512 Patent, including without limitation lost profits and not less than a reasonable royalty.

#### **FIFTH CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 8,768,147**

267. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-266 of this Complaint.

268. The '147 Patent is valid and enforceable under United States Patent Laws.

269. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '147 Patent.

270. A copy of the '147 Patent is attached as Exhibit E.

271. The original provisional applications that led to the issuance of the '147 Patent were filed on February 21, 2001, February 27, 2001, April 18, 2001, May 14, 2001, June 7, 2001, and June 28, 2001.

272. On January 12, 2015, a notice of allowance was mailed in the prosecution of U.S. Application No. 14/229,758 (now U.S. Patent No. 9,055,322), which claims the benefit of the same priority applications as the '147 Patent.

### **I. THE '147 PATENT**

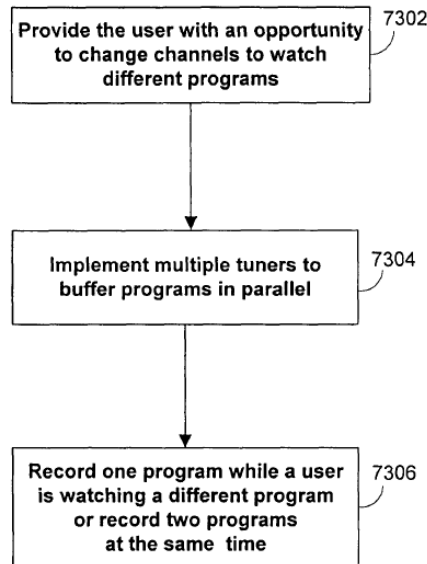
273. The '147 Patent discloses, among other things, “[m]ethods and systems that provide enhanced personal video recorder (‘PVR’) and interactive television program guide (‘IPG’) functionality.” '147 Patent at Abstract.

274. As the '147 Patent explains, “[i]n conventional PVRs [(personal video recording systems)], a program buffer is typically used to allow users to pause, rewind, or playback a television broadcast that a user is watching.” '147 Patent at 1:50-52.

275. According to the '147 Patent, “[o]ne drawback of this buffering technique is that the buffer only allows the user to pause or rewind up to the last ‘n’ minutes and only on the currently tuned channel since it was most recently tuned.” *Id.* at 1:54-57. The '147 Patent provides technological solutions to these shortcomings.

276. The '147 Patent discloses, for example, a multi-tuner environment in which “the buffer for a program may contain the portions of the video that the user may have missed by tuning away. Multiple tuners may be implemented to permit the PVR to buffer different programs in parallel. Multiple tuners may also be used to record one program while watching another program or to record two or more programs at the same time.” *Id.* at 5:53-59.

277. Figure 100 “shows an illustrative process for buffering two programs in parallel.” '147 Patent at 12:12-15.

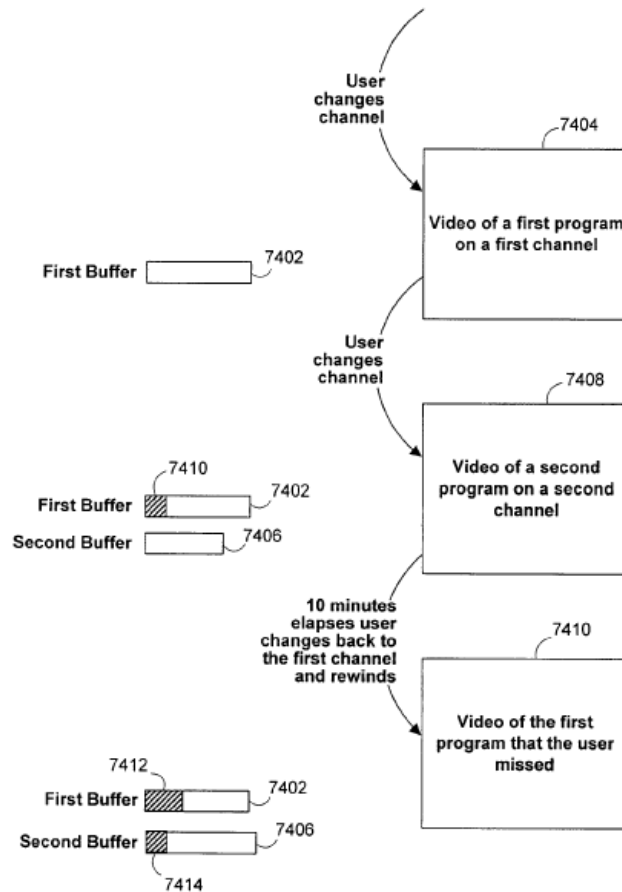
**FIG. 100**

278.

279. “Gaps in buffers of program may be avoided by buffering programs in parallel.

With reference now to FIG. 100, at step 7302, a user may be provided with an opportunity to change channels to watch different programs. At step 7304, programs may be buffered in parallel by implementing multiple tuners to buffer two programs at the same time. Multiple tuners may be implemented as part of a user's local user equipment. If desired, one or more of the multiple tuners may be implemented remotely. At step 7306, an interactive television application may record one program on a storage device (e.g., PVR) while a current user is watching a different program on a different channel. This simultaneous watch/record feature may be provided when multiple tuners have been implemented. The multiple tuners may also allow the interactive television application to record two programs at the same time. Additionally, this implementation may allow the user to watch two or more programs at the same time, for example, by switching channels between the two programs and rewinding on each channel change to see the programming that was missed.” ’147 Patent at 73:8-27.



**FIG. 101**

280. Figure 101 “shows an illustrative sequence of display screens and buffers that may be provided based on the illustrative process shown in FIG. 100.” ’147 Patent at 12:16-18.

281. The ’147 Patent explains that

First buffer 7402 may be created for a first program when a user changes the channel to watch video 7404 of the first program airing on a first channel. Second buffer 7406 may be created for a second program when the user changes the channel to watch video 7408 of the second program. Dashed region 7410 in first buffer 7402 represents video 7404 that was buffered before the user changed the channel. After watching the second program for ten minutes, the user may change the channel back to the first channel to return to the first program and may press a rewind key to rewind buffered video of the first program. The portion of the first program that was missed by the user may have been buffered while the user was watching the second channel. Dual tuners may be used to buffer both programs. Dashed region 7412 in first buffer 7402 shows that the interactive television application continues to buffer the first program after the user changes the channel. Thus, when the user returns to the first

program and rewinds the first program, video 7410 containing the missed portions of the first program may be presented to the user.

'147 Patent at 73:30-49.

## **II. HISTORICAL CONTEXT OF THE '147 PATENT**

282. Using multiple tuners together with parallel buffers of concurrent television programming was not common or conventional at the time of the inventions of the '147 Patent, let alone today.

283. To the contrary, as explained above with respect to the '512 Patent, dual-tuner set-top boxes and receivers were only just being made commercially available in a way that permitted recording of multiple programs simultaneously in 2001.

284. The '147 Patent represented a fundamental shift in how users could consumer live television, and how dual-tuner set-top boxes and receivers operated.

285. As the '147 Patent notes, a then-existing video recording buffer “is typically a circular buffer that stores the most recent ‘n’ minutes of programming that was watched by a user.” '147 Patent at 1:52-54. At the time of the inventions of the '147 Patent, this functionality did not permit an end-user to buffer two programs simultaneously nor to switch channels without losing the buffered content.

286. It took years after the inventions of the '147 Patent for major Pay-TV providers to offer functionality that captured the benefits of the '147 Patent. For example, DirecTV did not implement the benefits of the '147 Patent until 2009 with the introduction of its “DoublePlay” feature, which allows an end user buffer two shows at once.<sup>48</sup>

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<sup>48</sup>*DirecTV Double Play – Dual Live Buffers on HR2x HD DVRs!*, WEAKNES BLOG (Sept. 4, 2009), <http://www.wkblog.com/tivo/2009/09/directv-double-play-dual-live-buffers-on-hr2x-hd-dvrs/> (last visited Mar. 28, 2016).

287. The benefits and inventive concepts introduced by the '147 Patent are still lauded by Pay-TV providers today. For example, AT&T still advertises the DoublePlay feature as a selling point of its DirecTV-branded home entertainment products, including by featuring DoublePlay on its webpage "homepage."<sup>49</sup>

288. Given the state of the art at the time of the inventions and the years-later adoption of similar features in the market, the inventive concepts of the '147 Patent cannot be considered to be conventional. The '147 Patent discloses, among other things, an unconventional solution to an issue arising in the electronic programing guide space, and offered a technological solution to that issue.

289. The '147 Patent claims cannot be performed in the human mind or by using pen and paper. As noted above, the '147 Patent expressly states that it is drawn to address specific, technical problems arising in the context of electronic program guides and recording of television programs.

290. Consistent with the problem addressed being rooted in set-top box and electronic program guide technology, the '147 Patent's solutions naturally were also rooted in that same technology that cannot be performed with pen and paper or in the human mind. Thus, the '147 Patent discusses methods of implementing improved television recording functions using IPGs and specialized, non-standard television equipment.

291. A person having ordinary skill in the art at the time of the inventions of the '147 Patent would not have understood that the inventions could or would be performed solely in the human mind or using pen and paper. Using pen and paper would ignore the stated purpose of the '147 Patent and the problem it was specifically designed to address. Doing so would also run

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<sup>49</sup>DirecTV, *DirecTV DoublePlay*, [https://support.directv.com/app/answers/print/a\\_id/2471](https://support.directv.com/app/answers/print/a_id/2471) (last visited Mar. 28, 2016).

counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility.

### **III. '147 PATENT ALLEGATIONS**

292. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '147 Patent in violation of 35 U.S.C. § 271 *et seq.*, directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused DVR Products (hereafter "the '147 Accused Products") that infringe at least claim 11 of the '147 Patent. On information and belief after reasonable investigation, each of the '147 Accused Products comprises or is designed to be used in: a system for buffering programs, the system comprising: a storage device; and an interactive application implemented at least partially on user equipment and configured to: upon receiving a user request, from a user input device, to tune to a first channel: receive a first program from the first channel; and buffer the first program to enable the user to view on a display device a previously received portion of the first program; receive from the user input device a user request to tune to a second channel; and upon receiving the user request to tune to the second channel: receive a second program from the second channel; and buffer on the storage device the second program to enable the user to view a previously received portion of the second program, wherein the first program and second program are buffered in parallel, wherein an indicator that indicates the availability of at least one of the buffered first program and the buffered second program is generated for display on the display device to the user, and wherein the indicator also indicates a current play position and is interactive to enable the user to access another play position associated with at least one of the first program and the second program.

293. Defendants have been, and currently are, active inducers of infringement of the '147 Patent under 35 U.S.C. § 271(b) and contributory infringers of the '147 Patent under 35 U.S.C. § 271(c).

294. Defendants knew of the '147 Patent, or should have known of the '147 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the '147 Patent since at least as early as the filing and/or service of the original Complaint in this action. Further, the patent license agreement Comcast entered into with Rovi in 2010 specifically lists the application to the '147 Patent as one of the Rovi licensed patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc., on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents, including the '147 Patent. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to Rovi's guidance portfolio, including the '147 Patent. Defendants have provided the '147 Accused Products to their customers and/or instructions to use the '147 Accused Products in an infringing manner while being on notice of or willfully blind to the '147 Patent and Defendants' infringement. Therefore, on information and belief, Defendants knew or should have known of the '147 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

295. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '147 Patent. Comcast's Xfinity TV Partner Program was officially launched after the filing of the original

Complaint in this case, and after Comcast was put on notice of the '147 Patent. Comcast has knowledge of the '147 Patent and actively encourages third parties to implement the X1 infringing services in their service offerings, with knowledge that such services will directly infringe the '147 Patent.

296. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries to make, use, sell/lease, and/or offer for sale/lease the '147 Accused Products. The subsidiaries directly infringe at least claim 11 of the '147 Patent at least by making, using, selling/leasing, and/or offering for sale/lease the '147 Accused Products. Comcast induces such infringement by providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '147 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 11 of the '147 Patent, or subjectively believes that its actions will result in infringement of the '147 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

297. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make, use, sell/lease, offer for sale/lease, and/or import the '147 Accused Products. The Manufacturer Defendants directly infringe at least claim 11 of the '147 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '147 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '147 Patent. Upon information and belief, Comcast specifically intends that its actions will

result in infringement of at least claim 11 of the '147 Patent, or subjectively believed that its actions will result in infringement of the '147 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

298. Comcast also provides the '147 Accused Products and instructions to end-user customers so that such customers will use the '147 Accused Products in an infringing manner. For example, Comcast provides a brochure for a '147 Accused Product that highlights the “SWAP BETWEEN TWO CHANNELS” feature. In the brochure, Comcast instructs the end-user customers to “Press [the “Swap” button on a remote control] to switch between the tuners so you can control the viewing of two programs without missing a thing.”<sup>50</sup> Comcast end-user customers directly infringe at least claim 11 of the '147 Patent by using the '147 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the '147 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '147 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 11 of the '147 Patent, or subjectively believes that its actions will result in infringement of the '147 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

299. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries and (2) end-user customers, to directly infringe the '147 Patent.

300. For example, the Manufacturer Defendants provide the '147 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast

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<sup>50</sup> Comcast, *Welcome to Xfinity®TV HD DVR Brochure*, <http://www.comcast.com/~media/files/welcome%20kits/dvr/moa25%20s25%20dvr%20ig.ashx> (last visited Mar. 22, 2016).

and/or its subsidiaries directly infringe claims of the '147 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '147 Accused Products. The Manufacturer Defendants induce such infringement by providing the '147 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '147 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '147 Patent, or subjectively believe that their actions will result in infringement of the '147 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

301. The Manufacturer Defendants also induce end-user customers to infringe by providing the '147 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '147 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '147 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '147 Patent, or subjectively believe that their actions will result in infringement of the '147 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

302. Defendants contributorily infringe at least claim 11 of the '147 Patent by providing the '147 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '147 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '147 Accused Products are specially designed



to infringe at least claim 11 of the '147 Patent, and their accused components have no substantial non-infringing uses.

303. This Complaint will serve as further notice to Defendants of the '147 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

304. Additional allegations regarding Defendants' knowledge of the '147 Patent and willful infringement—including, for example, through Comcast's Xfinity TV Partner Program that it launched after the filing of the original Complaint in this case—will likely have evidentiary support after a reasonable opportunity for discovery.

305. Defendants' infringement of the '147 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

306. Defendants' infringement of the '147 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

307. Rovi has been damaged by Defendants' infringement of the '147 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

308. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '147 Patent, including without limitation lost profits and not less than a reasonable royalty.

#### **SIXTH CLAIM FOR RELIEF**

#### **INFRINGEMENT OF U.S. PATENT NO. 8,566,871**

309. Plaintiff realleges and incorporates by reference the allegations of paragraphs 1-308 of this Complaint.

310. The '871 Patent is valid and enforceable under United States Patent Laws.

311. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '871 Patent.

312. A copy of the '871 Patent is attached as Exhibit F.

313. The original provisional applications that led to the issuance of the '871 Patent were filed on July 29, 1998, March 4, 1999, and May 20, 1999.

#### **I. THE '871 PATENT**

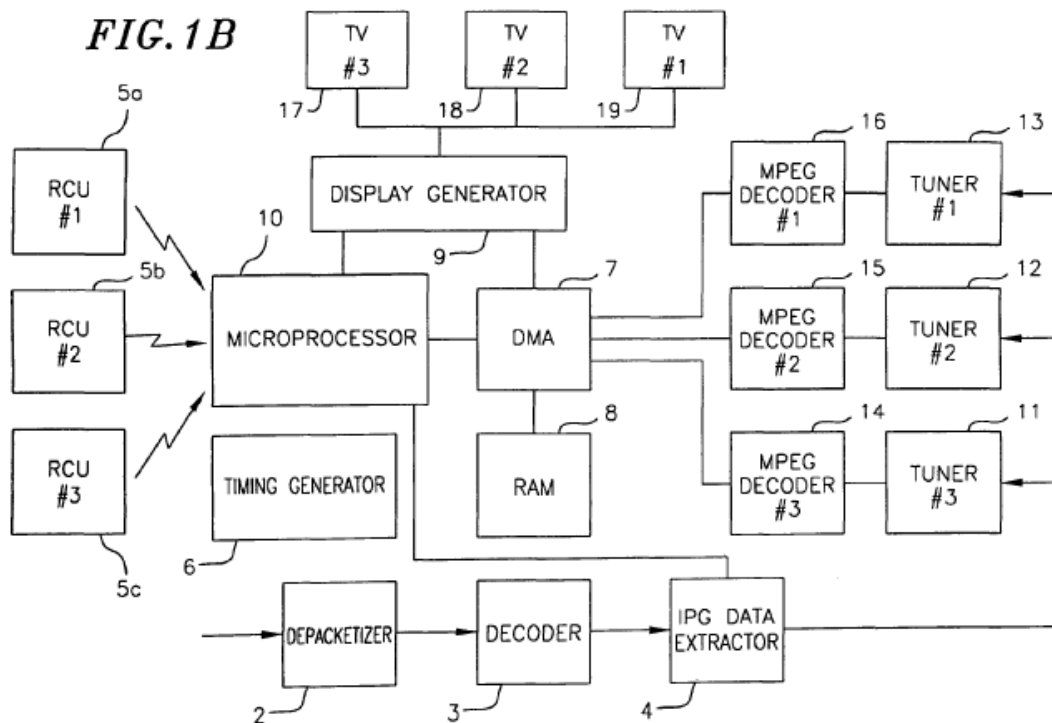
314. As the '871 Patent explains, at the time of its inventions, while modern IPGs were in the process of being developed, “each of these IPGs requires a set-top box or a computer. Thus, in a household with several TV sets, several set-top boxes are needed. This increases the cost of having multiple TV sets in a house.” '871 Patent at 1:43-46.

315. As the '871 Patent explains, at the time of invention, “it [was] difficult and time-consuming for parents to exercise parental control over several IPGs that are not related to and do not communicate with each other.” '871 Patent at 1:49-52. Thus, “there is a need for a multiple IPG system in a single set-top box or a single computer wherein the IPGs share some data and are capable of notifying users of any competing and conflicting resources. There is also a need for a centralized parental control over the multiple IPGs.” '871 Patent at 1:53-57.

316. The '871 Patent discloses, for example, that “[e]ach of the different IPGs share a common database. Therefore, a first IPG being viewed by a first user can display data added or modified via a second IPG by a second user of the system. Furthermore, the data added or modified by the second user can influence the viewing rights of the first user.” '871 Patent at Abstract.

317. The '871 Patent also discloses, for example, that “all the competing and conflicting requests for limited resources, such as VCR scheduled recordings, will be brought to the users’ attention and will be displayed by the system.” '871 Patent at Abstract.

318. Figure 1B “is a block diagram of the components of an embodiment of the invention provided in a single set-top box that feeds conventional TV receivers or monitors 17, 18, and [19].” '871 Patent at 6:39-42.

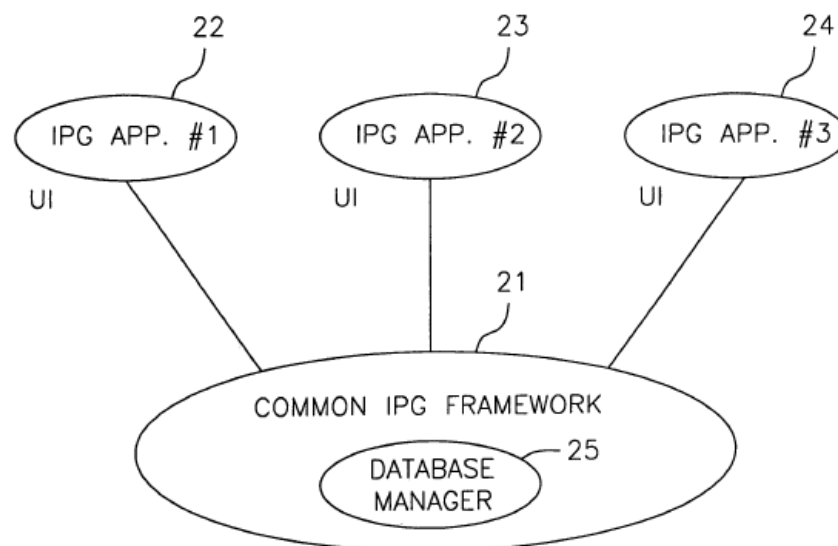


319. The '871 Patent explains that “[t]he set-top box receives digital TV signals and converts them into analog video and audio drive signals. . . . The components include a microprocessor 10, a memory controller or direct memory access (DMA) device 7 coupled to the microprocessor 10, RAM 8 coupled to the DMA device 7 and the microprocessor 10, . . . display generator 9 coupled to the microprocessor and the DMA device, and TV receivers 17-19 coupled to the display generator 9.” '871 Patent at 6:42-56.

320. The '871 Patent further explains that “Microprocessor 10 is programmed to operate in a multi-tasking mode, in which the video and audio drive signals, including the TV program signals and the IPG signals, for monitors 17, 18, and 19 are generated.” '871 Patent at 6:60-64.

321. The '871 Patent explains that “Microprocessor 10 operates to periodically update the multiple IPGs stored in the system RAM 8. IPGs are particular to specific users and/or particular to specific TV set. When a user decides to display a particular IPG, display generator 9 under the control of microprocessor 10 retrieves the IPG common data and the IPG specific data from RAM 8 through DMA controller 7. The display generator then outputs the particular IPG to the respective TV receiver.” '871 Patent at 7:38-45.

322. Figure 1C “shows a block diagram of a software architecture for the present invention.” '871 Patent at 7:53-54.



**FIG. 1C**

323. The '871 Patent explains that “[t]he IPG data is stored and organized in a common IPG framework **21**. The IPG data is shared between the three IPG applications 22-24.

The common IPG framework 21 includes an IPG database manager 25 that responds to the data requests from each of the IPG applications 22-24. Each of the IPG applications 22-24 include a user interface (UI) for accepting data from a user and a graphics generator for displaying data in a guide format. The IPG database manager 25 in the common IPG framework 21 keeps track of all the changes to the IPG data by each user. In summary, the IPG data for all three monitors are stored in one place, i.e., RAM 8, commands from all three remote control units (RCU's) 5a, 5b, and 5c are received and processed by one processor, i.e., microprocessor 10, and the individual IPG images formed responsive to the commands from all three RCU's are generated in one display generator, i.e., display generator 9.” ’871 Patent at 7:53-8:3.

324. The ’871 Patent discloses several advantages to this multi-IPG architecture:

In general, a major advantage of the IPG in the multi-source architecture is in allowing users to use multiple (three as an example) instances of the IPG simultaneously. This includes, but is not restricted to, the following:

1. Users can view three different channels simultaneously.
2. Users can have three separate “custom channels” lists (so that the parent’s bedroom may have an entirely different list of channels, ordering of channels, and favorite channels than the children’s bedroom).
3. Users may have three separate groups of parentally-controlled channels and passwords. This would mean that the parents can prohibit Cinemax (for example) from being displayed on the TV in the children’s bedroom but may watch it in their own bedroom.
4. Users may have three different AutoTunes occurring at once without conflict. For example, the living room TV may tune itself to “Friends” while the children’s TV tunes itself to “Barney” simultaneously. This would be a conflict in a single-source environment.

’871 Patent at 8:49-67.

## **II. HISTORICAL CONTEXT OF THE ’871 PATENT**

325. The claimed inventions of the ’871 patent were not common or conventional at the time of the inventions of the ’871 Patent, let alone for years thereafter.

326. To the contrary, even in 2012, years after the inventions of the '871 Patent, watching different channels on different television displays required a second cable box for the vast majority of users,<sup>51</sup> and “having multiple DVRs in house meant managing duplicate series recording lists and walking into different rooms to resolve conflicts.”<sup>52</sup>

327. By late 2012, DirecTV (Genie) and Dish Network (Hopper) introduced “whole-home DVR” devices to fix these issues “by centralizing the recording on one box and by using less expensive extenders at each TV. . . . The beauty of a great whole-home DVR experience is not having to think about which room you’re in, because every single TV in the house behaves the same way.”<sup>53</sup>

328. Verizon introduced similar features in January 2013 with the announcement of a Media Server platform consisting of one central DVR set-top box and up to five “client” devices attached to separate TVs.<sup>54</sup>

329. The benefits and inventive concepts introduced by the '871 Patent are still lauded by television providers today. For example, AT&T, the nation’s largest Pay-TV service provider, prominently advertises “DIRECTV Whole-Home DVR service.”<sup>55</sup>

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<sup>51</sup> Geoffrey Morrison, *How do I get HD from one source to multiple TVs? (Morrison’s Mailbag)*, CNET (May 14, 2012), <http://www.cnet.com/news/how-do-i-get-hd-from-one-source-to-multiple-tvs-morrisons-mailbag/> (last visited Mar. 28, 2016).

<sup>52</sup> Ben Drawbaugh, *DirecTV Genie whole-home DVR review*, ENGADGET (Dec. 29, 2012), <http://www.engadget.com/2012/12/29/directv-genie-whole-home-dvr-review/> (last visited Mar. 28, 2016).

<sup>53</sup> *Id.*

<sup>54</sup> Verizon, *Verizon & Motorola Partner on Next-Gen FiOs TV Media Server* (Jan. 7, 2013), <http://www.verizon.com/about/news/verizon-motorola-partner-next-gen-fios-tv-media-server/> (last visited Mar. 28, 2016).

<sup>55</sup> DirecTV, *1 HD DVR For All Your TVs – Whole Home DVR*, <http://www.directv.com/technology/wholehome> (last visited Mar. 28, 2016).

330. Given the state of the art at the time of the inventions and the years-later adoption of similar features in the market, the inventive concepts of the '871 Patent cannot be considered to be conventional. The '871 Patent discloses, among other things, an unconventional solution to various issues arising with electronic programing guides, and offered technological solutions to those issues.

331. The '871 Patent claims cannot be performed in the human mind or by using pen and paper. As noted above, the '871 Patent expressly states that it is drawn to address specific, technical problems arising in the context of electronic program guides and recording of television programs.

332. Consistent with the problem addressed being rooted in set-top box and electronic program guide technology, the '871 Patent's solutions naturally were also rooted in that same technology that cannot be performed with pen and paper or in the human mind. Thus, the '871 Patent discusses methods of implementing multiple IPGs using specialized, non-standard television equipment and a single memory accessible to a plurality of IPGs.

333. A person having ordinary skill in the art at the time of the inventions of the '871 Patent would not have understood that the inventions could or would be performed solely in the human mind or using pen and paper. Using pen and paper would ignore the stated purpose of the '871 Patent and the problem it was specifically designed to address. Doing so would also run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility.

### **III. '871 PATENT ALLEGATIONS**

334. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '871 Patent in violation of 35 U.S.C. § 271 et seq., directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the

United States, and/or importing into the United States without authority or license, including without limitation, one or more of the Accused DVR Products and Accused Non-DVR Products (hereafter “the ’871 Accused Products”) that infringe at least claim 12 of the ’871 Patent. On information and belief after reasonable investigation, each of the ’871 Accused Products is designed to be and is used with Comcast’s AnyRoom® DVR feature.

335. Defendants have been, and currently are, active inducers of infringement of the ’871 Patent under 35 U.S.C. § 271(b) and contributory infringers of the ’871 Patent under 35 U.S.C. § 271(c).

336. Defendants knew of the ’871 Patent, or should have known of the ’871 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the ’871 Patent since at least as early as the filing and/or service of the original Complaint in this action. Further, prior to the filing this Complaint, Rovi provided presentations and claim charts to Comcast specifically identifying patents in Rovi’s portfolio, including the ’871 Patent, and showing an example of Comcast’s infringement of the ’871 Patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc., on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to Rovi’s guidance portfolio, including the ’871 Patent. Defendants have provided the ’871 Accused Products to their customers and/or instructions to use the ’871 Accused Products in an infringing manner while being on notice of or willfully blind to the ’871 Patent and Defendants’ infringement. Therefore,



on information and belief, all Defendants knew or should have known of the '871 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

337. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '871 Patent. Comcast's Xfinity TV Partner Program was officially launched after the filing of the original Complaint in this case, and after Comcast was put on notice of the '871 Patent. Comcast has knowledge of the '871 Patent and actively encourages third parties to implement the X1 infringing services in their service offerings, with knowledge that such services will directly infringe the '871 Patent.

338. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries to make, use, sell/lease, and/or offer for sale/lease the '871 Accused Products. The subsidiaries directly infringe at least claim 12 of the '871 Patent at least by making, using, selling/leasing, and/or offering for sale/lease the '871 Accused Products. Comcast induces such infringement by providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '871 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 12 of the '871 Patent, or subjectively believes that its actions will result in infringement of the '871 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

339. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make,

use, sell/lease, offer for sale/lease, and/or import the '871 Accused Products. The Manufacturer Defendants directly infringe at least claim 12 of the '871 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '871 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '871 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 12 of the '871 Patent, or subjectively believed that its actions will result in infringement of the '871 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

340. Comcast also provides the '871 Accused Products and instructions to end-user customers so that such customers will use the '871 Accused Products in an infringing manner. For example, Comcast markets its AnyRoom® DVR products to end-user customers by advertising that “[t]he primary DVR is linked to networked set-top boxes in your home that allow you to view completed recordings and those already in progress.”<sup>56</sup> Comcast end-user customers directly infringe at least claim 12 of the '871 Patent by using the '871 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the '871 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '871 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 12 of the '871 Patent, or subjectively believes that its actions will result in infringement of the '871 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

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<sup>56</sup> Xfinity, *Say hello to the new AnyRoom® DVR*, <http://www.xfinity.com/anyroomdvr/> (last visited Mar. 28, 2016).

341. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries and (2) end-user customers, to directly infringe the '871 Patent.

342. For example, the Manufacturer Defendants provide the '871 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast and/or its subsidiaries directly infringe claims of the '871 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '871 Accused Products. The Manufacturer Defendants induce such infringement by providing the '871 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '871 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '871 Patent, or subjectively believe that their actions will result in infringement of the '871 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

343. The Manufacturer Defendants also induce end-user customers to infringe by providing the '871 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '871 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '871 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '871 Patent, or subjectively believe that their actions will result in infringement of the '871 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

344. Defendants contributorily infringe at least claim 12 of the '871 Patent by providing the '871 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '871 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with substantial non-infringing uses. The '871 Accused Products are specially designed to infringe at least claim 12 of the '871 Patent, and their accused components have no substantial non-infringing uses.

345. This Complaint will serve as further notice to Defendants of the '871 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

346. Additional allegations regarding Defendants' knowledge of the '871 Patent and willful infringement—including, for example, through Comcast's Xfinity TV Partner Program that it launched after the filing of the original Complaint in this case—will likely have evidentiary support after a reasonable opportunity for discovery.

347. Defendants' infringement of the '871 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

348. Defendants' infringement of the '871 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

349. Rovi has been damaged by Defendants' infringement of the '871 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

350. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '871 Patent, including without limitation lost profits and not less than a reasonable royalty.

**SEVENTH CLAIM FOR RELIEF**

**INFRINGEMENT OF U.S. PATENT NO. 6,418,556**

351. Rovi realleges and incorporates by reference the allegations of paragraphs 1-350 of this Complaint.

352. The '556 Patent is valid and enforceable under United States Patent Laws.

353. Rovi Guides, Inc. owns, by assignment, all right, title, and interest in and to the '556 Patent.

354. A copy of the '556 Patent is attached as Exhibit G.

355. The original patent application that led to the issuance of the '556 Patent was filed on September 9, 1993. On July 14, 2014, a notice of allowance was mailed in the prosecution of U.S. Application No. 11/841,867 (now U.S. Patent No. 8,893,178), which claims the benefit of the application leading to the '556 Patent.

356. A certificate of correction issued on April 12, 2016, which corrects the naming of the inventors on the face of the patent by adding Michael Morris and removing Rosetta Rogers from the list of inventors.

**I. THE '556 PATENT**

357. The '556 Patent discloses, among other things, "[a]n electronic program schedule system which includes a . . . video display generator [that] receives video control commands from the data processor and program schedule information from the memory and displays a portion of the program schedule information in overlaying relationship with a television program appearing on a television channel in at least one mode of operation of the television

programming guide.” ’556 Patent at Abstract. The electronic program schedule system “provides the user with a more powerful and convenient operating environment, while, at the same time, increasing the efficiency of navigation by the user through the guide.” ’556 Patent at 1:9-12.

358. The ’556 Patent identifies a problem with then-existing electronic program systems: “Collectively, the prior electronic program systems may be difficult to implement and cumbersome to use. They also fail to provide viewing capabilities that address in a more realistic manner the viewing habits of the users of these electronic program systems. Moreover, many of these systems are complex in their design and are expensive to implement. Ease of use and economy are primary concerns of television program distributors and viewers as they contemplate dramatic increases in the number and nature of program networks and other television-based services. And, as the number of television channels available to a user increases dramatically with the advent of new satellite and cable-based technologies, the utility of these prior systems substantially diminishes.” ’556 Patent at 1:28-42.

359. The ’556 Patent also identifies another problem with then-existing electronic program systems: “The prior electronic program guides also lack a method for creating a viewing itinerary electronically while still viewing a program currently appearing on the television receiver. Moreover, these prior program guides leave much guess work for the user as he navigates through a sequence of channels. When skimming through channels to ascertain the program then being displayed on any channel, commonly known as ‘channel surfing,’ the user needs to guess which program is currently being aired from the video encountered as the user surfs through the channels. Since much—in some cases, up to 30%—of the programming appearing on any given channel at any given time is advertising or other commercial

programming, the user is not provided with any clues as to what program is appearing on a selected channel at a given time and must therefore wait until the advertisement or commercial is over before ascertaining the program then appearing on the selected channel.” ’556 Patent at 2:42-58.

360. Figure 1 of the ’556 Patent “is a block diagram showing various components of the preferred embodiment of the invention herein.” ’556 Patent at 4:44-45.

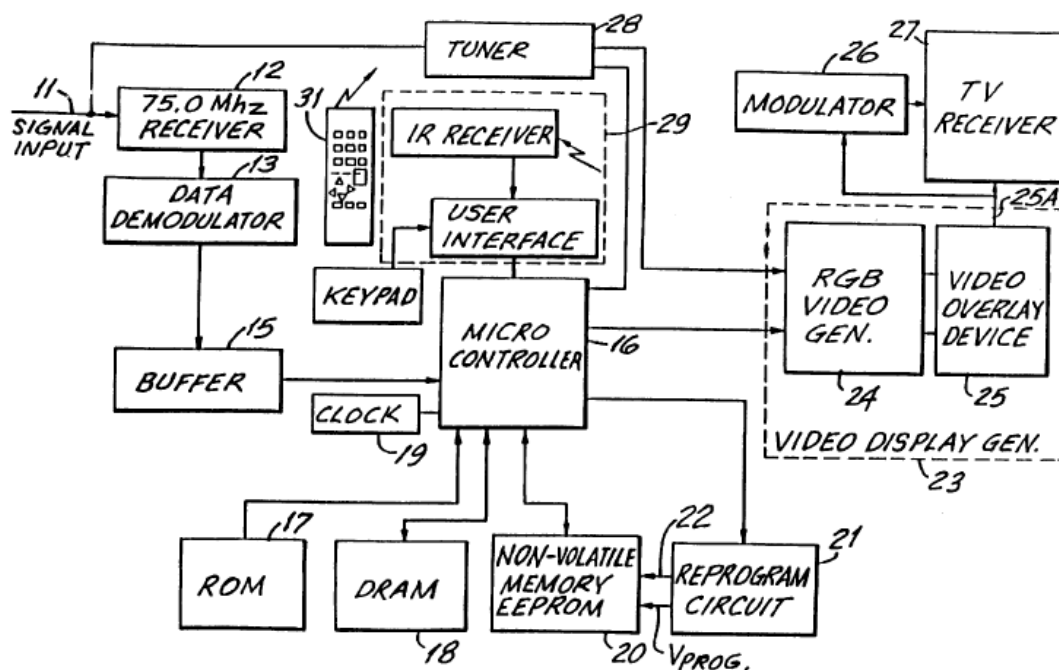


FIG. 1

361. “Physically, these system components can be located in a user’s set-top box cable converter box or other signal reception or processing device, such as a satellite receiver. Alternatively, the components can be mounted in a separate housing, or included as part of a television receiver, VCR, personal computer or multimedia player.” ’556 Patent at 6:32-38.

362. Figure 2 “is a block diagram showing the combination of program and schedule information by the video overlay device utilized in the preferred embodiment of the invention.” ’556 Patent at 4:46-48.

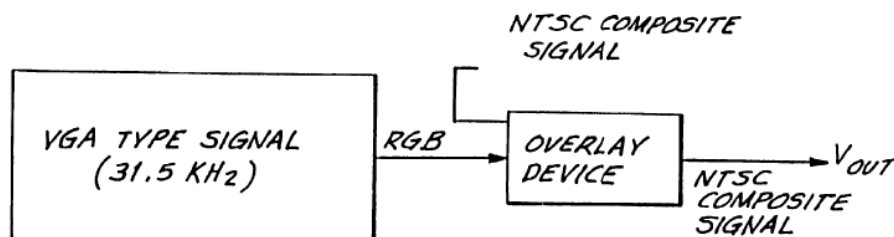


FIG. 2

363. “The overlay device 25 converts and combines the RGB signal with the signal from the tuner 28, and produces a composite NTSC output signal containing both the program signal and the program schedule information.” ’556 Patent at 8:25-28.

364. In view of the historical context and development of electronic program guides, discussed below, a person of ordinary skill in the art would have understood that the ’556 Patent’s inventions provide an unconventional solution to providing advanced IPG capabilities.

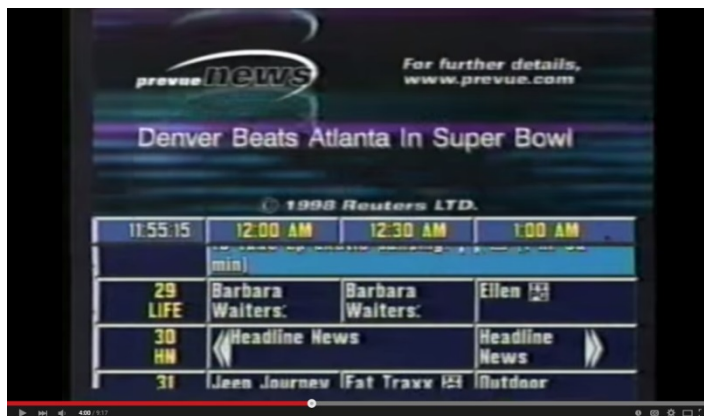
## II. HISTORICAL CONTEXT OF THE ’556 PATENT

365. The ’556 Patent’s inventions were not common or conventional at the time of the ’556 Patent’s inventions, let alone for years afterward.

366. At the time of the inventions of the ’556 Patent, the largest and most sophisticated Pay-TV providers did not offer anything resembling the claimed functionality. It was not until many years after the inventions of the ’556 Patent that providers began offering, for example, the ability to navigate an interactive IPG overlaid over a received television program, and to select for tuning any number of available programs, including programs that had not yet aired.



367. Indeed, at the time of the inventions of the '556 Patent, IPGs were still in their infancy. The IPGs discussed by the '556 Patent were not yet widely adopted by Pay-TV providers. Instead, still prevalent at the time were non-interactive programming schedules that scrolled through programming for all channels, as shown below:



Prevue Channel format from 1993 to 1999<sup>57</sup>

368. IPGs, to the extent they were available at the time of the inventions of the '556 Patent, did not provide users with an overlaying relationship with a television program.

369. Given the state of the art at the time of invention and the years-later adoption of similar features in the market, the inventive concepts of the '556 Patent cannot be considered to be conventional.

370. The '556 Patent claims cannot be performed in the human mind or by using pen and paper. As noted above, the '556 Patent expressly states that it is drawn to address specific, technical problems arising in the context of electronic program guides.

371. Consistent with the problem addressed being rooted in electronic program guide and television technology, the '556 Patent's solutions naturally were also rooted in that same technology that cannot be performed with pen and paper or in the human mind. Thus, the '556

<sup>57</sup> *Prevue Becomes TV Guide Channel – Feb. 1, 1999*, YOUTUBE, <https://www.youtube.com/watch?v=rLApAmSQQ5U> (last visited Apr. 12, 2016).

Patent discusses systems for implementing improved IPG functions using IPGs and specialized, non-standard television equipment.

372. A person having ordinary skill in the art at the time of the inventions of the '556 Patent would not have understood that the inventions could or would be performed solely in the human mind or using pen and paper. Using pen and paper would ignore the stated purpose of the '556 Patent and the problem it was specifically designed to address. Doing so would also run counter to the inventors' detailed description of the inventions and the language of the claims and be a practical impossibility.

### **III. '556 PATENT ALLEGATIONS**

373. Defendants have infringed and are infringing, individually and/or jointly, either literally or under the doctrine of equivalents, the '556 Patent in violation of 35 U.S.C. § 271 et seq., directly and/or indirectly, by making, using, offering for sale/lease, selling or leasing in the United States, and/or importing into the United States without authority or license, set-top boxes, including without limitation, one or more of the Accused DVR Products and Accused Non-DVR Products (hereafter "the '556 Accused Products") that infringe at least claim 2 of the '556 Patent. On information and belief after reasonable investigation, each of the '556 Accused Products comprises or is designed to be used with Comcast's "Mini Guide."<sup>58</sup>

374. Defendants have been, and currently are, active inducers of infringement of the '556 Patent under 35 U.S.C. § 271(b) and contributory infringers of the '556 Patent under 35 U.S.C. § 271(c).

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<sup>58</sup> Xfinity, *Xfinity TV: X1: Guide - How to Navigate in the Mini Guide*, <http://customer.xfinity.com/help-and-support/cable-tv/x1-guide-how-to-navigate-in-the-mini-guide> (last visited Apr. 12, 2016).

375. Defendants knew of the '556 Patent, or should have known of the '556 Patent but were willfully blind to its existence. Upon information and belief, Defendants have had actual knowledge of the '556 Patent since at least as early as the filing and/or service of this Complaint. Further, prior to the filing this Complaint, Rovi provided presentations and claim charts to Comcast specifically identifying patents in Rovi's portfolio, including the '556 Patent, and showing an example of Comcast's infringement of the '556 Patent. In addition, (a) Comcast Corporation, on behalf of itself and for its affiliates, (b) Arris Group, Inc., on behalf of itself and all of its subsidiaries, and (c) Scientific-Atlanta, Inc., a predecessor-in-interest of Technicolor, on behalf of itself and all of its subsidiaries, previously took licenses to Rovi patents. Further, the Manufacturer Defendants have provided IPG products to Comcast, knowing, upon information and belief, that Comcast had a license to Rovi's guidance portfolio, including the '556 Patent. Defendants have provided the '556 Accused Products to their customers and instructions to use the '556 Accused Products in an infringing manner while being on notice of or willfully blind to the '556 Patent and Defendants' infringement. Therefore, on information and belief, all Defendants knew or should have known of the '556 Patent and of their own infringing acts, or deliberately took steps to avoid learning of those facts.

376. Comcast knowingly and intentionally encourages and aids at least (1) Comcast regional subsidiaries; (2) the Manufacturer Defendants; (3) end-user customers and (4) third parties through Comcast's Xfinity TV Partner Program, to directly infringe the '556 Patent. Comcast's Xfinity TV Partner Program was officially launched after the filing of the original Complaint in this case, and after Comcast was put on notice of the '556 Patent. Comcast has knowledge of the '556 Patent and actively encourages third parties to implement the X1

infringing services in their service offerings, with knowledge that such services will directly infringe the '556 Patent.

377. For example, Comcast provides the technical and business infrastructure, know-how, and other support to instruct and enable Comcast regional subsidiaries to make, use, sell/lease, and/or offer for sale/lease the '556 Accused Products. The subsidiaries directly infringe at least claim 2 of the '556 Patent at least by making, using, selling/leasing, and/or offering for sale/lease the '556 Accused Products. Comcast induces such infringement by providing the technical and business infrastructure, know-how, and other support to enable and facilitate such infringement, knowing of, or being willfully blind to the existence of, the '556 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 2 of the '556 Patent, or subjectively believes that its actions will result in infringement of the '556 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

378. In addition, upon information and belief, Comcast provides the specifications, know-how and technical support to instruct and enable the Manufacturer Defendants to make, use, sell/lease, offer for sale/lease, and/or import the '556 Accused Products. The Manufacturer Defendants directly infringe at least claim 2 of the '556 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '556 Accused Products. Comcast induces such infringement by providing the specifications, know-how and technical support to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '556 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 2 of the '556 Patent, or subjectively believed that its actions will

result in infringement of the '556 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

379. Comcast also provides the '556 Accused Products and instructions to end-user customers so that such customers will use the '556 Accused Products in an infringing manner. For example, Comcast markets its "Mini Guide" to end-user customers by touting that "[i]n addition to the main guide grid, the XFINITY on the X1 Entertainment Operating System offers the option of viewing programming information from the Mini Guide, a streamlined version of the guide that displays on the right-hand side of your screen." Comcast provides step-by-step instructions to end-user customers on how to "[n]avigate in the Mini Guide," e.g., "To access the Mini Guide, press the right arrow button on the remote control."<sup>59</sup> Comcast end-user customers directly infringe at least claim 2 of the '556 Patent by using the '556 Accused Products in their intended manner to infringe. Comcast induces such infringement by providing the '556 Accused Products and instructions to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '556 Patent. Upon information and belief, Comcast specifically intends that its actions will result in infringement of at least claim 2 of the '556 Patent, or subjectively believes that its actions will result in infringement of the '556 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

380. The Manufacturer Defendants knowingly and intentionally encourage or aid at least (1) Comcast and its subsidiaries; and (2) end-user customers, to directly infringe the '556 Patent.

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<sup>59</sup> Xfinity, *Xfinity TV: X1: Guide - How to Navigate in the Mini Guide*, <http://customer.xfinity.com/help-and-support/cable-tv/x1-guide-how-to-navigate-in-the-mini-guide> (last visited Apr. 12, 2016).

381. For example, the Manufacturer Defendants provide the '556 Accused Products and hardware and software components thereof to Comcast and/or its subsidiaries. Comcast and/or its subsidiaries directly infringe claims of the '556 Patent by making, using, selling/leasing, offering for sale/lease, and/or importing the '556 Accused Products. The Manufacturer Defendants induce such infringement by providing the '556 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '556 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '556 Patent, or subjectively believe that their actions will result in infringement of the '556 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

382. The Manufacturer Defendants also induce end-user customers to infringe by providing the '556 Accused Products, which are specifically designed to infringe, knowing and intending they will be used by end-user customers to infringe. End-user customers directly infringe as set forth above. The Manufacturer Defendants induce such infringement by providing the '556 Accused Products to enable and facilitate infringement, knowing of, or being willfully blind to the existence of, the '556 Patent. Upon information and belief, the Manufacturer Defendants specifically intend that their actions will result in infringement of claims of the '556 Patent, or subjectively believe that their actions will result in infringement of the '556 Patent but took deliberate actions to avoid learning of those facts, as set forth above.

383. Defendants contributorily infringe at least claim 2 of the '556 Patent by providing the '556 Accused Products and/or software or hardware components thereof, that embody a material part of the claimed inventions of the '556 Patent, that are known by Defendants to be specially made or adapted for use in an infringing manner, and are not staple articles with

substantial non-infringing uses. The '556 Accused Products are specially designed to infringe at least claim 2 of the '556 Patent and their accused components have no substantial non-infringing uses.

384. This Complaint will serve as notice to Defendants of the '556 Patent and its infringement, should Defendants contend that they did not previously have knowledge thereof.

385. Additional allegations regarding Defendants' knowledge of the '556 Patent and willful infringement—including, for example, through Comcast's Xfinity TV Partner Program that it launched after the filing of the original Complaint in this case—will likely have evidentiary support after a reasonable opportunity for discovery.

386. Defendants' infringement of the '556 Patent was willful and deliberate, entitling Rovi to enhanced damages and attorneys' fees.

387. Defendants' infringement of the '556 Patent is exceptional and entitles Rovi to attorneys' fees and costs incurred in prosecuting this action under 35 U.S.C. § 285.

388. Rovi has been damaged by Defendants' infringement of the '556 Patent and will continue to be damaged unless Defendants are enjoined by this Court. Rovi has suffered and continues to suffer irreparable injury for which there is no adequate remedy at law. The balance of hardships favors Rovi, and public interest is not disserved by an injunction.

389. Rovi is entitled to recover from Defendants all damages that Rovi has sustained as a result of Defendants' infringement of the '556 Patent, including without limitation lost profits and not less than a reasonable royalty.

#### **PRAYER FOR RELIEF**

WHEREFORE, Rovi prays for a judgment in its favor and against Defendants and respectfully requests the following relief:

1. A judgment declaring that Defendants have infringed one or more claims of each of the Asserted Patents in this litigation pursuant to 35 U.S.C. §§ 271(a), 271(b) and/or 271(c);

2. A preliminary injunction pursuant to 35 U.S.C. § 283 in accordance with the principles of equity preventing the Comcast Defendants, their officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from continued selling or offering for sale the X1 IPG Product to any cable operator or any Pay-TV provider that is not licensed by Rovi to make use or sell any product offered by Comcast that practices, provides, or contains any method, apparatus, or system covered by one or more of the Asserted Patents;

3. A preliminary injunction pursuant to 35 U.S.C. § 283 in accordance with the principles of equity preventing the Comcast Defendants, their officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from selling, offering or providing to any of its cable customers and consumer end users any IPG product solution that practices, provides, or contains any method, apparatus, or system covered by one or more of the Asserted Patents commencing on a date ninety (90) days following the entry of the preliminary injunction;

4. An injunction pursuant to 35 U.S.C. § 283 permanently enjoining Defendants, their officers, directors, attorneys, agents, servants, employees, parties in privity with, and all persons in active concert or participation with any of the foregoing, from continued acts of infringement, contributory infringement, or inducing infringement of the Asserted Patents in this litigation;

5. A judgment requiring Defendants to make an accounting of damages resulting from Defendants' infringement of the Asserted Patents in this litigation;



6. A judgment awarding Rovi its damages resulting from Defendants' infringement of the Asserted Patents in this litigation, and increasing such damages pursuant to 35 U.S.C. § 284 because of the willful and deliberate nature of Defendants' conduct;

7. A judgment requiring Defendants to pay Rovi costs, expenses, and pre-judgment and post-judgment interest for Defendants' infringement of each of the Asserted Patents in this litigation;

8. A judgment finding that this is an exceptional case and awarding Rovi's attorney's fees pursuant to 35 U.S.C. § 285; and

9. Such other relief as the Court deems just and proper.

Dated: April 25, 2016

/s/ Douglas A. Cawley

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***Counsel for Plaintiff Rovi Guides, Inc.***

**DEMAND FOR JURY TRIAL**

In accordance with Rule 38 of the Federal Rules of Civil Procedure and Local Rule CV-38, Plaintiff respectfully demands a jury trial of all issues triable to a jury.

Dated: April 25, 2016

/s/ Douglas A. Cawley

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***Counsel for Plaintiff Rovi Guides, Inc.,***

**CERTIFICATE OF SERVICE**

I hereby certify that counsel of record who are deemed to have consented to electronic service are being served with a copy of this document via the court's CM/ECF system per Local Rule CV-5(a)(3), on April 25, 2016.

/s/ Douglas A. Cawley  
Douglas A. Cawley